CONSTRUCTION NEWS

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RAILWAYS.

(*Denotes that this work is advertised in Engineering News.)

NOTE.—The items regarding railway construction in this department are now classified under the State in which the principal amount of work is to be done. These items will be grouped according to the geographical arrangement, found so satisfactory in the past, as follows:

Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Tennessee, Kentucky, Ohio, Indiana, Michigan, Illinois, Wisconsin, Iowa, Minnesota, Kansas, Nebraska, South Dakota, North Dakota, Wyoming, Montana, Missouri, Arkansas, Texas, Oklahoma, Colorado, New Mexico, Idaho, Utah, Nevada, Arizona, Washington, Oregon, California, Alaska.

In Canada items are grouped in a similar order, beginning with the Maritime Provinces, then Quebec, Ontario, Manitoba, Saskatchewan, Alberta and British Columbia.

All items regarding work in Mexico are grouped under the one title—Mexico.

VERMONT.—New York, New Haven & Hartford R. R. Co.—Announcement is made from the New Haven office of the New Haven that parties in the interest of the Vermont Valley R. R. Co. have purchased the holdings of the Sortwell Estate in the Montpelier & Wells River R. R., the Barre R. R. and the Barre Ry. It is further stated that as soon as legal preliminaries can be arranged, the properties will be merged into and become a part of the Boston & Maine R. R., and thereafter be operated as a part of the same. The controlling interest in this road is understood to have heretofore been held by the Sortwell Estate and its purchase by the New Haven road interests discloses a new step in its contest with the Grand Trunk. The newly acquired line extends from Wells River to Montpelier, with branches to Barre and other points, the whole including about 60 miles of road.

MASSACHUSETTS.—Boston & Maine R. R.—The citizens have requested that the elimination of grade crossings in Waltham, which had practically been decided upon by elevating the tracks, be done by depressing them. The elevation would have cost about $1,000,000, while the depression will cost about $1,200,000. President Wellen has taken the matter under advisement.

PENNSYLVANIA.—The Baltimore & Ohio R. R. Co. will ask for bids within a few days for the construction of a double-track tunnel or an open cut with three tracks to take the place of the present single-track tunnel at Sand Patch, about 30 miles west of Cumberland on the Allegheniеs & Pittsburg division. If a tunnel is constructed it will be about 4,000 ft. long, but if a cut is decided upon it will be longer. F. L. Stuart, Baltimore, Md., is Ch. Engr.

NORTH CAROLINA—Durham-Danville Ry.—The project to build a 60-mile railway between Durham, N. C., and Danville, Va., has been revived. It will, according to press reports, traverse Durham, Person, Caswell and Orange counties. Those identified with the project are: John F. Wily, W. B. Guthrie, C. M. and W. F. Carr, J. L. Morehead, Durham, N. C.

GEORGIA—Blakely Southern Ry Co.—This recently organized company contemplate the construction of a 20-mile railroad between Blakely and Jakin, both in Early county. The incorporators are W. C. Snodgrass, W. I. MacIntyre, W. D. Hargrave, J. S. Montgomery, Jr., W. M. Coon, J. H. Herbener, E. R. Jerger, R. A. Jones, A. T. Snodgrass and T. H. McNeil, all of Thomasville, Ga.

Macon, Dublin & Savannah R. R.—This railroad, controlled by the Seaboard Air Line, is considering an extension from Macon to Atlanta, about 80 miles. This would give the Seaboard a direct line from Savannah to Atlanta. J. T. Wright, Macon, Ga., is Vice-Pres. and Gen. Mgr.

Moultrie, Fort Gaines & Western Ry. Co.—This recently organized company proposes to build a 100-mile railroad between Moultrie in Colquitt county, and Fort Gaines, in Clay county, through Mitchell, Baker, Early and Calhoun counties. The directors are: Frank Roberts, A. L. Davis, A. F. Langford, C. E. Davis, W. L. Roberts, D. C. Ashby, Walter E. Davis, W. P. Gidden and Di Ingram, of Valdosta, Ga., and W. P. Roberts, of Jacksonville, Fla.

ALABAMA.—Tuscaloosa Mineral R. R.—We are officially advised that the survey and location are complete for the line from Tuscaloosa to Birmingham and bids will probably be received in ten days. F. G. Blair, Ashlton Bldg., Tuscaloosa, Ala., is Pres. Noted March 9.

TENNESSEE.—Louisville & Nashville R. R.—A detour, for freight, around Nashville is planned. This will be between Madison Station and Brentwood, about 20 miles. From Brentwood south to Decatur, Ala., a second track will probably be built. W. H. Courtenay, Louisville, Ky., is Ch. Engr.

KENTUCKY.—Press advices state that: Practically all of the rights of way for the new coal road of the Consolidated Coal Co., out from Shelby Station, on the Chesapeake & Ohio R. R., 30 miles, to a connection with the Lexington & Eastern, at the headquarters of Elkhorn Creek, where the Consolidated Coal Co. is preparing for large developments, have been secured, and contracts will soon be let for the construction of the road. The contract will call for the completion of the road within seven months, and in order to complete it by that time it will be awarded in small sections, only a few miles to each contractor.

OHIO.—Cleveland & Pittsburg R. R. (Pennsylvania System)—The Mayor of Cleveland, on Feb. 21, approvad the ordinance providing for the abolition of grade crossings along the line of the Cleveland & Pittsburg R. R. in Cleveland, from north of Central Ave. S. E. to East 26th St., and granting to the railroad company the right to maintain masonry abutments at the lines of and steel columns or supports in various streets and highways.

ILLINOIS.—The Milwaukee, Peoria and St. Louis R. R. Co.—This newly incorporated company is planning to construct a railroad from Peoria through Tazewell, Woodford, Marshall, Putnam, Bureau, Lee, Ogle and Winnebago counties to Rockeford, about 100 miles. The incorporators are E. C. Morton, F. B. Reed, F. C. Vehmeyer, John O'Neil and Frank H. Gardiner, all of Chicago.

WISCONSIN.—The Minneapolis, St. Paul & Sault Ste. Marie Ry.—This company is planning another cutoff on its St. Paul-Minneapolis and Chicago-Milwaukee line. It involves the construction of a new line from Chippewa Falls to Greenwood. This will give the Soo practically an airline from Chippewa Falls to Marshfield, will eliminate some costly grades and curves and at the same time shorten the line about fifteen miles. Thomas Green, Minneapolis, Wis., is Ch. Engr.

MINNEAPOLIS.—Canadian Northern Ry.—This company is, according to press reports, planning to invade the Vermilion iron range and has a party of engineers in the field running the line from Cook, on the Rainy Lake division, to Pine Island and east. It is expected that the new line will continue south and east to a connection with old Port Arthur, Duluth & Western, which is owned by the Canadian Northern. T. Turnbull, Winnipeg, Man., is Asst. Ch. Engr.

✚ARKANSAS.—Memphis, Dallas & Gulf R. R. Co.—We are officially advised that this company has completed the very heavy reconstruction work between Nashville and Murfreesboro, bringing that section down to the standard grade adopted for the line, and has let a contract for the first two miles out of Murfreesboro on the line east to Arkadelphia to T. H. SATER & BRO., who have moved on to the work. The next six miles are up the valley of Prairie Creek and require frequent crossings of that stream with heavy rock work and stream diversions, and is wholly different class of work from the first two miles. Several contractors are figuring on this, and a contract will be let in a few days. The balance of the line is easy with the exception of the part through the Little Chalybeate Mountains, where the valley of the Terre Noire River is followed, and the work difficult. The work will all be let by the company direct to small contractors in short sections. About 45 miles of track will be laid this year. A. M. Van Anken, Nashville, Ark., is Ch. Engr. Noted March 2.

TEXAS.—Missouri, Kansas & Texas Ry.—Press advices state that the "orphan" line from Trinity to Colmesneil, will be connected with the system by building the gap between Trinity and Waco about 130 miles. A. M. Acheson, Dallas, Tex., is Acting Ch. Engr.

OKLAHOMA.—Colorado, Oklahoma & New Orleans Ry.—This new company proposes to build a railroad in the states of Colorado, New Mexico, Oklahoma, Arkansas and Louisiana, to extend from Trinidad, Colo., to New Orleans, La., a distance of 1,700 miles. The proposed road will traverse the counties of Cimarron, Texas, Beaver, Harper, Ellis, Woodward, Major, Blaine, Garfield, Kingfisher, Canadian, Oklahoma, Cleveland, Pottawotomie, Seminole, Hughes, Coal, Atoka, Latimer, Pushmataha and McCurtin in the state of Oklahoma. It will enter Oklahoma in the extreme northwestern part of the state and wind its way through the richest sections of the central part, making its exit into New Mexico in the extreme southeastern part. W. J. Thompson, W. L. Peck, S. A. Horton, C. F. Woodward, L. T. Poole, D. J. Grigsby and Eugene Scharr, of Oklahoma City, are the incorporators.

UTAH.—Eastern Utah R. R. Co.—This company recently incorporated by Henry Wade and T. R. Parsons, of Price, Utah; W. J. Tidwell, of Wellington, Utah; N. S. Avery, of Helper, Utah, and others to construct a railroad 60 miles in length between Wellington and Emery.

ELECTRIC RAILWAYS.

(✚ Denotes a contract awarded.)

LOWELL, MASS.—The Board of Trade has voted to indorse the petition for the extension of the electric railway tracks from the terminus in North Tewksbury to Andover by the Boston & Northern St. Ry. Co., 84 State St., Boston.

✚BRANFORD, CONN.—The Shore Line Electric Co. has awarded the contract for the construction of two miles of roadbed between this place and East Haven to the PIERSON ENGINEERING & CONSTRUCTION CO., Bristol, Conn. A. William Sperry, Inc., New Haven, Conn., is Engr.

✚BRIDGEPORT, CONN.—It is reported that the general contract for the construction of the Bridgeport & Danbury Electric Ry. has been awarded to the AETNA CONSTRUCTION CO., New Haven, Conn. One steel bridge, 400 ft. in length and several smaller concrete bridges will be required. A. William Sperry, Inc., New Haven, Conn., is Engr. Noted Jan. 26.

ALBANY, N. Y.—The United Traction Co. has received a franchise to doubletrack its line on Hamilton St. from Dove St. east to Philip St., and will begin its work in the early spring. On March 20 there will be a hearing on its application for a franchise to doubletrack Hudson Ave. from Grand St. to South Pearl St.

BELLE HARBOR, N. Y.—The Ocean Electric Ry. Co., New York, N. Y., (controlled by the Long Island Ry.), has petitioned the Public Service Comm., First District, for permission to extend its lines eight miles through Belle Harbor to the property of the Neponsit Realty Co. J. R, Savage, Jamaica, L. I., N. Y., is Ch. Engr.

CICERO, N. Y.—The Syracuse & South Bay Electric Ry. Co., has received a franchise to build its tracks through Cicero for its proposed extension to Brewerton and Central Square. T. H. Mather, Syracuse, N. Y., is Ch. Engr.

NEW YORK, N. Y.—The Union Ry., of New York City, has received a franchise to extend its railway across the Madison Ave. Bridge from Madison Ave. and 136th St. to E. 138th St. and Exterior St. in the Bronx. J. D. Kent, 175th St., and Southern Boulevard, is Ch. Engr.

LAKEWOOD, N. J.—The Trenton, Lakewood & Atlantic Ry. Co. has received a franchise from the Lakewood Township Committee to build its railway on Ocean Ave. in Lakewood. Noted Jan. 5.

BUTLER, PA.—The Pittsburg Slippery Rock, Grove City & Northern St. Ry Co. is the corporate name of the company which proposes to build between Butler, Slippery Rock, Grove City and Pirre. Noted Feb. 16.

DUQUESNE, PA.—A charter has been granted to the Independent Developing Co., and final steps are being taken to build a trolley line from Duquesne to Glassport at a cost of about $500,000. Those interested in the company are from Duquesne, Irwin and Pittsburg, and are taking over the Duquesne & Dravosburg St. Ry Co. now operating a local line.

DUQUESNE, PA.—See item under Manufacturing Plants.

HARRISBURG, PA.—Governor Tener approved the application for the state charter applied for by the United States Railways Co. to build and operate a 7-mile line from Humbert to Barrensville, Somerset county. Capital, $70,000. Incorporators are I. W. Samans, Uniontown, Pres.; T. B. Palmer, E. A. Smith, L. W. Fogg, J. H. Palmer, D. D. Johnson and Harold W. Seaman, all of Uniontown.

WAYNESBURG, PA.—A franchise has been granted by the Borouge authorities to the Waynesburg & Blackville St. Ry. Co. to build a street railway through certain streets. The line will connect Waynesburg and Morgantown, W. Va., with Waynesburg and Pittsburg, Pa. Samuel Eaken, Waydertown, W. Va., is Pres.

WELLSBORO, PA.—A franchise has been granted the Fiago Traction Co., to build a street railway on certain streets. The line will be built between Wellsboro and Mansfield, connecting Middlebury, Chatham and Covington. Geo. K. Keagle, Avis, Pa., is Gen. Mgr.

RICHMOND, VA.—John C. Robertson, of Forest Hill, Va., is reported organizing a company to build a railroad from Richmond to Urbanna, Va., about 55 miles. The Seven Pines line of the Virginia Ry. & Power Co. is to be acquired and extended to form the road, which may be built under the charter of the Richmond, Urbanna & Peninsula Ry. Co., obtained some tige ago and a company orzanized by Mr. Robertson. The proposed route is by way of Seven Pines to King William Courthouse, King and Queen Courthouse and Urbanna, with a ferry to Irvington. Survey will be made in the near future.

MACON, GA.—The Macon Railway & Light Co. has applied for a franchise to extend its railway over certain streets in Macon. J. T. Nyhan, Gen. Mgr., Macon.

OWENSBORO, KY.—A recent incorporation, The Henderson Interurban Ry Co., proposes to build an electric line connecting Owensboro, Henderson, Uniontown, Morganfield, Dixon and Providence, about 100 miles. The incorporators are E. F. Wheaton and F. M. Smith, Nashville, Tenn., and W. W. Cooper, Henderson, Ky.

STEUBENVILLE, OHIO.—The Steubenville-Wellsburg & Weirton Ry. Co., has been incorporated for the purpose of building an electric line connecting Steubenville, Wellsburg and Weirton. Frank D. Sinclair, Nelson D. Miller, Albert G. Loe, Jasper G. Wheaton and Michael Keane are the incorporators.

CHRISNEY, IND.—The Evansville & Chrisney Ry. Co. has recently been incorporated to build an interurban railway to connect Chrisney, Evanston, Troy and Tell City. about 20 miles. The incorporators are: J. P. Chrisney, J. F. Bergaman, M. A. Abbott, all of Chrisney, and others.

LADOGA, IND.—H. Kessler, of Ladoga, is considering plans for the construction of a 10-mile electric railway between Ladoga and Jamestown, about twelve miles.

EAST GRAND RAPIDS, MICH.—The Detroit, Lansing & Grand Rapids Ry. Co., has applied for a franchise to build its railway through East Grand Rapids. This railway will connect Detroit and Grand Rapids.

SYCAMORE, ILL.—Plans are under consideration by the Woodstock & Sycamore Traction Co. to build an extension to Marengo. B. Armstrong, Sycamore, Ill., is Ch. Engr.

OKLAHOMA CITY, OKLA.—The Western Power & Irrigation Co. of Oklahoma City, Okla., has increased its capital stock from $200,000 to $500,000, the proceeds to be used for the construction of an electric railway from Cordell to Colony, Okla., work on construction of which is expected to begin within a year.

TULSA, OKLA.—We are officially advised that the line from Tulsa to Sand Springs, under construction for the Sand Springs Interurban Ry. Co., of which Charles Page, this city is president, is progressing rapidly. The grading is about half completed. Gasoline motor cars will be used for passengers and steam locomotives for freight. W. E. Rohde is Mgr., and W. H. Hendron is Ch. Engr. Both are of Tulsa. Noted Feb. 2.

✚FRESNO, CAL.—The contract has been awarded to S. F. HOBLER, Sanger, Cal., at $75,000. This contract is for the grading of the right-of-way from Fresno to Kingsburg, to be built by the Fresno, Hanford & Summit Lake Interurban Ry. Co. Other contracts will be awarded soon. F. S. Granger, this city, is Mgr.

SAN FRANCISCO, CAL.—The Bd. Pub. Wks. received the following bids for the construction of the Geery Street, Park & Ocean R. R. Co.: For rail joints and fastenings the Rail Joint Co., of New York, bid $18,660. For rail bonds, Eccles & Smith bid $4,420. For copper wire the Standard and Underground Conduit & Cable Co. bid $14.07 per 100 lbs. For steel rods and nuts the Payne Bolt Works bid $59.50 per ton of 2,000 lbs. Noted Feb. 23.

VALLEJO, CAL.—The Board of Supervisors of Solano County have granted a franchise to the Vallejo & Northern Electric R. R. Co. to lay tracks along Front St. to the Main St. wharf, to connect through the Monticello Steamship line with San Francisco. T. T. C. Gregory, Pres. of the road, states work on the road bed will begin at once. The company now has a right of way from Sacramento to the water front of Vallejo.

MONCTON, N. B.—The Moncton Tramways, Electricity and Gas Co., Ltd., is incorporated and is considering the construction of a street railway in this city. The company is planning to have about five miles completed by the last of the year.

HAMILTON, ONT.—It is reported that the Dominion Power & Transmission Co. has decided to relay tracks on King St. east from Sanford Ave.; renew tracks on Main St. of the Hamilton, Grimsby & Beamsville Ry. Co., and radial lines; repair roadway, etc. J. B. Griffith is Purchasing Agent.

TORONTO, ONT.—Bids will be received until April 4, by G. R. Geary, Ch. of the Bd. of Control, for delivery of 1,340 tons of open hearth steel rail, 80 lb. section, and 30,000 untreated wood ties, white cedar preferred, although other woods will be considered. Specifications and further information may be obtained from C. H. Rust, City Engr.

ST. BONIFACE, MAN.—The Council has granted a franchise to the Manitoba Rural Railways Co. to build a railway. Work will begin in the near future.

VANCOUVER, B. C.—The British Columbia Elec. Ry. will shortly construct a 22-mile extension from Victoria to Deep Cove, to cost about $500,000.

LIGHT AND POWER PLANTS.

(*Denotes that this work is advertised in Engineering News.)

SPRINGFIELD, MASS.—Bids will be received until March 24 for apparatus and electric wiring to be installed in the Municipal Powerhouse. French & Hubbard are the Engrs., Albany Bldg., Boston.

SPRINGFIELD, MASS.—The gas and electric light commissioners have granted the United Electric Light Co., of this city, permission to issue 2,500 shares of new capital stock at $200. This sum will be spent for improvements.

✚WORCESTER, MASS.—The contract for electric light fixtures to be installed in the Union Station has been awarded to the COGLIN ELECTRIC CO. The cost will be about $7,000.

BUFFALO, N. Y.—A bill authorizing the issue of bonds for $250,000 for the establishment of a municipal lighting plant in connection with the equipment of the new water-works pumping station at the foot of Porter avenue has been introduced in the State Legislature at Albany. The money to be used for the purchase of three turbine electric generators and other requisite equipment. Francis G. Ward is Comr. of Pub. Wks.

GLOVERSVILLE, N. Y.—Bids will be received until March 21 by Morrell Vrooman, City Engr., for furnishing and operating about 130 electric arc street lights and about 190 incandescent street lights for a period of five or ten years.

NEW YORK, N. Y.—Bids will be received by the Department of Public Charities at East 20th street, New York, until 2.30 p. m., on March 23, for a subway for conduits and electrical cable for lighting the buildings and streets of the upper division of the New York City Home for the Aged and Infirm, Blackwells Island, Borough of Manhattan, the City of New York. Blank forms and further information may be obtained at the office of the Supervising Engineer of the Department, foot of East 26th street, where plans and specifications may be seen. Michael J. Drummond is Comr.

✚NEW YORK, N. Y.—We are officially advised that the contract for the installation of electrical equipment of the conduit tracks on the Queensboro Bridge, over the East River, has been awarded to the SNARE & TRIEST CO., 143 Liberty St., N. Y., at $182,300. The other bidders were Charles Meads & Co., $191,000; the North Eastern Construction Co., $191,380; Cooper & Evans Co., $197,719; McHarg-Barton Co., $213,200; Haggerty-Drummond Co., $233,184; James J. Hoey, $234,913, and Lord Electric Co., $242,320.

✚NEWTON, N. J.—It is stated that the Newton Gas & Electric Co. has awarded the contract for the construction of its new plant, to cost about $15,000, to O'DONNELL & McNANIMAN, Newton, N. J. William L. Keplinger, this city, is Receiver.

BRISTOL, PA.—It is rumored that the Pennsylvania R. R. intends building an electric power plant in Bristol to light its new elevated line.

PENNSYLVANIA.—Legal notices are now being published in Lehigh, Schuylkill, Carbon, Northampton, Bucks and Montgomery counties stating that application will be made to the Governor April 3 by W. A. Lathrop, Rollin H. Wilbur and H. F. Baker, of Philadelphia, for charters for about 60 electric companies in these five counties. This will be the first public move in the fulfillment of the great power scheme of the Lehigh Coal & Navigation Co., which aims to electrify eastern Pennsylvania, affecting a territory with a population of 2,500,000, including Philadelphia. Applications will be made for companies in every township through which the proposed electric line will pass. William J. Turner and Samuel Dixon, of Philadelphia, are the solicitors. Eventually at the proper time there will be a consolidation of all these electric companies, under the management of the Lehigh Coal & Navigation Co. This scheme has been in process of formation for the last three years. Powerhouses are to be built at Lansford, to be run by coal that has heretofore been allowed to go to waste, as well as by water power, and the main high tension transmission lines are to run into Philadelphia with branches to all industries, towns, villages and sections that will contract to utilize the power. The plan will require, eventually, the expenditure of about $4,000,000.

TWO LICK, PA.—The Indiana County St. Rys. Co. has decided to erect at Two Lick a power plant which, according to plans, will be a duplicate of its present plant here. John G. St. Clair is Secy. and Treas.

✚MARCUS HOOK, PA.—The Marcus Hook Council has awarded the contract for electric street lighting to the BEACON LIGHT CO., of Chester, Pa.

BRIDGEPORT, W. VA.—The Y. & O. Coal Co. has asked contractors to look over plans for the proposed new power plant they are to build for their Barton mines. It is to be a fireproof structure of brick. The engines, both of 300-HP., are out of commission and the generator is ruined according to reports.

✚DALTON, GA.—The contracts for the enlargement and removal of the water-works and electric light plant have been awarded to the following contractors: CASEY-HEDGES CO., THE INTERNATIONAL STEAM PUMP CO., PLATT IRON WORKS CO., UNITED STATES CAST IRON PIPE & FOUNDRY CO., COLUMBIA IRON WORKS, M. P. FLYNN & CO., BINGHAM & TAYLOR, JOHN W. ASHE, WESTINGHOUSE CO., BALL ENGINE CO. The city has voted bonds to the amount of $50,000 to pay for this work. Noted Feb. 9.

McCOMB CITY, MISS.—The contract with the McComb Electric Light Co. is about to expire. The City Council has decided to establish its own electric light plant.

✚AKRON, OHIO.—The contract for the construction of a concrete dam at Akron, Ohio, 2,000 ft. long and 53 ft. high, for the Northern Ohio Power Co., has been awarded to JAMES E. SOUTHERLAND & CO., Michigan City, Ind.

✚ALLIANCE, OHIO.—The contract to place electric fixtures in the Hartman Theatre, at Third and State Sts., has been awarded to the AVERY-LOEB CO. The fixtures are valued at $25,000.

ASHTABULA, OHIO.—The City Council has appropriated $10,000 for the use of the city lighting plant, which will double its capacity. Two boilers will be installed to cost about $6,300. Bids will be asked for in the near future.

CONNEAUT, OHIO.—The New York, Chicago & St. Louis Ry. Co., it is stated, will install an electrical plant for lighting its yards, offices, shops and roundhouse.

DAYTON, OHIO.—It is reported that the Oakwood St. Ry. Co. will build a new powerhouse on South Brown St., to supply power for its Dayton and Troy line. H. P. Clegg, Brown St. and Fairground Ave., Dayton, is Vice-Pres. and Gen. Mgr.

COLUMBUS, IND.—The Indianapolis, Columbus & Southern Traction Co. is planning to let a contract for the construction of a dam in Driftwood River, construct a canal six miles in length and erect and equip a powerhouse for the generation of electricity. Will G. Irwin is Pres.

LAPORTE, IND.—Articles of consolidation of the Northern Indiana Gas & Electric Co., with a capital stock of $5,000,000, have been filed in the various counties of Indiana in which the corporation will do business. It is a merger of the South Shore and Electric Co., the Indiana Harbor & East Chicago Electric Co., the Plymouth Lighting Co. and the Whiting Electric Light Co. The officers are Pres., Clarence H. Geist, Philadelphia; Vice-Pres., Samuel T. Bodine.; Secy., Lewis Lillie.

LOGANSPORT, IND.—The Wabash River Power Co. has ordered plans for the construction of a 14-ft. concrete dam in the Wabash River at Georgetown. Mansfield Engineering Co., Indianapolis, Ind., is doing the engineering work. O. H. Binner is Pres. of the company.

NATIONAL MILITARY HOME, IND.—Bids will be received at the office of Treasurer Marion Branch, N. H. D. V. S., National Military Home, Grant Co., Ind., until 1 p. m., March 27, for furnishing one electric motor-driven pump of 500,000-gallon capacity in 24 hours. Specifications, with blank proposals and other information, may be obtained from J. W. Sanderson, Treas.

EAST ST. LOUIS, ILL.—The City Council has passed an ordinance providing for the immediate establishment of 100 new arc lights in the principal streets. These lights will be strung on Broadway from Main St. to Eighth St.; Collinsville Ave., from Broadway to St. Clair Ave., and Missouri Ave., from Sullivan to Eighth Sts.

JOLIET, ILL.—About $500,000 will be expended this year by the Economy Light & Power Co. and the Illinois Valley Gas & Electric Co. in improving the various plants and systems in several cities in which franchises have been secured. This announcement was made by Gen. Mgr. Charles A. Munroe. Appropriations have been made and the work will be started in the near future. The work will be as follows: Rebuilding and extending lines at Coal City, as noted Feb. 9; Braceville, Gardner, Streator, Ottawa, Sparland, Chillicothe, Dwight, Odell and other Illinois towns. Building water tower and laying new water mains at Chillicothe. Laying and improving gas mains and gas systems at Ottawa, Marseilles and Morris.

✚NEENAH, WIS.—The contract for furnishing and installing power equipments, including motors, generators, switchboards, engine, etc., has been awarded by the Hardwood Products Co. to the ALLIS-CHALMERS CO., Milwaukee.

KANSAS CITY, KAN.—Bonds to the amount of $350,000 were voted at a recent election to build a municipal electric light plant. J. E. Smyth is City Clk.

LEAVENWORTH, KAN.—The bidders on the electric light and power installation at the Penitentiary here received by R. V. Ladow, Supt. of Prisons, Washington, D. C., are as follows: F. E. Newbery Electric Co., St. Louis, Mo., $4,470; Guarantee Electric Co., St. Louis, Mo., $5,114; International Electric Fixture & Contracting Co., St. Louis, Mo., $6,445, and Nebraska Engineering Co., Lincoln, Neb., $6,733.

MONETT, MO.—An electric light plant, for which $35,000 of bonds have been voted and sold will be erected this year. James Johnson is City Clk.

HELENA, ARK.—Plans are being prepared for the new powerhouse and gas plant to be erected by the new owner of the Helena Gas Co. General Manager O'Brien stated March 5 that the first work in the expenditure of $500,000 in a first class and up-to-date powerhouse would be started as soon as the plans and specification could be received and approved.

YUMA, ARIZ.—H. W. Blaisdell has applied for a franchise to build and operate an electric light and power plant.

EVERETT, WASH.—H. H. White, Gen. Mgr. of the Everett Gas Co., announced that about $32,065 will be expended in Everett during the coming summer in laying about nine miles of mains.

ORIENT, WASH.—A power plant will be erected at Boulder Falls, three miles below this place, by Walter Bryant.

SPOKANE, WASH.—Press reports state that $2,000,000 will be expended by the Panhandle Electric Railway & Power Co., headed by Victor M. Smith, of New York, in the construction of a plant on Priest River, in northern Idaho, capable of developing 30,000 horsepower. A transmission line will also be built from the proposed plant to Spokane, a distance of 70 miles. The city commissioners of Spokane, to be elected on March 7, will be asked for a franchise. The company offers to furnish street lights and power for the city's up-river pumping station under the price paid to the previous operating company. Power for domestic use is offered at proportionate prices.

BAKER CITY, ORE.—The City Comr. has instructed the City Engr. to prepare estimates for a municipal lighting plant. The plan is to construct a pipe line from Elk Creek to Salmon Creek. Plan also includes the construction of new reservoir of 3,000,000 gallons.

CLINE FALLS, ORE.—The Crook County Water, Light & Power Co., owners of the power site at Cline Falls, on the Deschutes River is, it is reported, having plans made for development of power at that point. The company expects to generate enough power to supply all this section of the county with lights and power, and also build a transmission line to Prineville.

FOREST GROVE, ORE.—The City Council has granted a 25-year franchise to the Independent Electric Co. for the transmission of current and the erection of poles over certain streets.

ELSINORE, CAL.—The City Council has passed an ordinance granting M. A. Gardner and M. L. Cambern a franchise to construct, lay, maintain and operate gas pipes and mains for purpose of carrying gas for heat and light in this city. C. P. Carter is City Clk.

LOS ANGELES, CAL.—Bids will be received by the Board of Supervisors of Los Angeles County until April 3 for furnishing two engine generator sets in the Hall of Records. H. J. Lelande is County Clk.

The Bd. of Supervisors will receive sealed bids up to 2 p. m., March 27, for a franchise granting the right to construct electric pole and wire system through Central Ave., Sycamore Ave. and Linden St. H. J. Lelande is County Clk.

The Board of Supervisors will receive bids until 2 p. m., March 27, for furnishing and installing electric lighting fixtures in Hall of Records now being constructed. H. J. Lelande is County Clk.

✚The contract has been awarded by Paul C. Pope, Arch., Pacific Electric Bldg., to FOULKES-GAYLORD CO., Security Bldg., for wiring the office building owned by the Broadway Investment Co. Contract price, $5,975.

✚LOS ANGELES, CAL.—Parkinson & Bergstrom, Archs., Security Blg., have awarded contract to the FOULKES-GAYLORD ELECTRIC CO., Security Bldg., for the electric wiring work in the new Chester eleven-story office building at Fifth and Spring streets. Contract price $14,500.

RIVERSIDE, CAL.—George I. Lamy, Vice-Pres. and Ch. Engr. of El Sobrante Land Co., has purchased a ranch comprising 43,000 acres south of the Tehachapi. He will develop from 500 to 1,000 ins. of water.

SAN FRANCISCO, CAL.—The Bd. of Public Wks. has voted to ask the Supervisors to set aside $55,000 of Geary Street Ry. bond money for the purchase of a powerhouse site at North Beach, the location of which is not to be made public at present.

TUSTIN, CAL.—The County Bd. of Supervisors will receive bids shortly for the installation of an electric lighting system in Tustin and vicinity.

WILLOW, CAL.—F. V. D. Johnson, of Redding, Mgr. of the Northern California Power Co. states, it is reported, that the contracts have been awarded for the construction of the new gas plant and that all work will be started by May 15.

FORT WILLIAM, ONT.—We are officially advised that the Kaministiquia Power Co., Ltd., will award contracts for about 60 miles of standard copper wire. This 7,000-HP. hydroelectric plant will cost approximately $150,000. The contracts for the electrical equipment have been awarded. R. S. Kelsch, Power Bldg., Montreal, Ont., is Des. Engr.

GUELPH, ONT.—See item under Streets and Roads.

ROULEAU, SASK.—Bids will be received until April 4 by W. H. Stewart, City Secy.-Treas., for electrical machinery, producer gas plant and transmission line. J. Darlington Whitmore, Willoughby and Duncan Block, Regina, is Engr.

SASKATOON, SASK.—Bids will be received until 4 p. m., March 27, by the City Comrs. for the following: (a) 750-KW., 2,200-volt, 60-cycle, 120-r. p. m., 2-phase generator, exciter, switchboard, and exciter switchboard, installed complete; (b) 1,250-HP., 120-r. p. m., vertical cross compound Corliss engine, with necessary condensing apparatus, and feed-water heaters, installed complete; (c) direct-connected exciter engine to run exciter for 759-KW. generator, installed complete; (d) one steel smokestack with a height of 100 ft., and inside diameter of 80 ins., together with corresponding connections to boilers, installed complete. Specifications will be furnished on application to the City Comrs., Saskatoon. James Clinkskill is Mayor, and James Clinkskill and W. B. Neil are City Comrs. Noted Feb. 2.

ALBERNI, B. C.—The Alberni District Electric Light & Power Co. has been incorporated to supply light and power here. W. W. G. McAllister is Secy.

MONCTON, N. B.—The Moncton Tramways, Electricity & Gas Co., Ltd., is installing natural gas pipes in this city. About 20 miles will be laid by October. The Mayor of Moncton writes that natural gas has been discovered in large quantities about eleven miles from the city.

BRIDGES.

(✚ *Denotes a contract awarded.*)

MANCHESTER, CONN.—The town is preparing to replace a number of old bridges with modern structures of steel and concrete. The Prospect St. and the West Center bridge will be built at once. The Road Superintendent has plans and specifications on file.

ALBANY, N. Y.—Bids will be received by Charles E. Treman, Supt. Pub. Wks., until noon, March 21, for the reconstruction of the central pier of the drawbridge over Minisceono Creek in Rockland County, N. Y.

JERSEY CITY, N. J.—Resolutions have been adopted for the construction of a bridge over the Morris Canal at Communipaw Ave. O. J. Darling is Engr.

ALLENTOWN, PA.—Bids will be received by the Board of Commissioners of Lehigh County until 10 a. m., Apri[illegible] for repairing five wooden bridges at an [illegible]mated cost of $10,000. J. S. Troxell, is [illegible] of Bd.

BROOKVILLE, PA.—Bids will be received by the Commissioners of [illegible]rson County, until noon, March 24, for constructing a reinforced concrete bridge over [illegible]unaway Run, in Clover Township. W. [illegible] Kelly is Clk. of Comrs.

PHILADELPHIA, PA.—Bids for widening the Chestnut street bridge [illegible] 60 to 70 ft., have been received as follows: American Paving & Construction [illegible], $101,900; M. & J. B. McHugh, $108,600; [illegible]wego Bridge Co., $119,930; Stockel Steel [illegible], $136,000; and John McMenemy, $135,[illegible]. Noted on March 2.

PITTSBURG, PA.—Bids will [illegible] be asked for the construction of a concrete bridge over Negley Run, the estimated cost of which is $180,000. Joseph G. [illegible]nstrong is Dir. Pub. Wks.

READING, PA.—Plans have [illegible] approved for the construction of a bri[illegible] over the Schuylkill River at Penn St. The plans provide for five main spans, [illegible] ft. each, and nine approach spans 48 [illegible] each.

COLUMBUS, OHIO.—Bids will [illegible] received by the Board of Commissioners [illegible] Franklin County, until noon, April 5, for [illegible] following work: Grading roadway and constructing approach to bridge over Hayden Run; constructing approaches to the Eberly bridge over Alum Creek; constructing a reinforced concrete culvert on the Eberly road, east of Eberly bridge; constructing the superstructure of the Wilson bridge over the Olentangy River; constructing the roadway on the superstructure of the Wilson bridge over the Olentangy River. F. M. Sayre is County Audr.

DEFIANCE, OHIO.—Plans are being prepared by Frank G. Blue, County Surv., for the construction of a steel bridge over the Fourth St. canal.

DELAWARE, OHIO.—Bids will be received by W. H. Bodurtha, Audr., Delaware County, until 1.30 p. m., April 3, for constructing the superstructures of two bridges.

PORT CLINTON, OHIO.—Contracts for the construction of a drawbridge have been awarded as follows: For the substructure, to the MODERN CONSTRUCTION CO., Fremont, Ohio, at $6,975; superstructure, to the HOME ENGINEERING CO., Toledo, Ohio, at $7,887.

TOLEDO, OHIO.—Bids will be received by the Board of Commissioners of Lucas County until March 17, for constructing sixteen culverts. Carl J. Sanzenbacher is County Audr.

XENIA, OHIO.—Bids will be received by the Board of Commissioners of Green County until 11.30 a. m., April 12, for the construction of the substructure and approaches of the Louis Hill bridge in Sugar Creek Township.

ANDERSON, IND.—Bids will be received by the Board of Commissioners of Madison County until March 20, for the construction of three bridges, two with two 95-ft. spans, and concrete abutments, pier and bridge floor, and one with 27-ft. span I-beam construction, with wood floor and concrete abutments. W. T. Richards is County Audr.

DECATUR, IND.—Bids will be received by the Board of Commissioners of Adams County until April 14 for constructing the Abe Egley bridge.

ELKHART, IND.—The Board of Commissioners of Elkhart County will soon ask for bids for the following bridge work: Construction of a concrete floor on the Bristol bridge; construction of a bridge over Christian Creek on Beardsley Ave., and an iron bridge in Jefferson Township; and the repair of a bridge on Beardsley Ave. and bridge No. 85 in Elkhart Township.

GREENSBURG, IND.—The Commissioners of Decatur County have ordered plans and specifications for the construction of two, and the repair of twelve bridges.

HUNTINGTON, IND.—The Commissioners of Huntington County have prepared plans and specifications for the construction of 20 bridges and culverts. Bids will soon be asked. J. B. Vernon County Engr.

SHELBYVILLE, IND.—The Commissioners of Shelby County have ordered plans and specifications for the construction of three reinforced concrete bridges and one steel bridge with concrete floor. George E. Olman is County Engr.

✚KALAMAZOO, MICH.—The contract for the construction of a concrete bridge over Kalamazoo River, has been awarded to RICHARD HEYSTEK, Kalamazoo, at $18,000. The other bidders were: Henry L. Vandehorst, $22,600; E. W. Buckley, $20,900; Carpenter & Anderson, $19,335; Albion Lumber Co., $23,654; E. W. Seamans, $19,888.88; Illinois Bridge Co., $18,200; Wyncoop & Gormley, $23,994.

REPUBLIC, MICH.—Bids will be received by V. S. Hillyer, Ishpeming, Mich., until March 20, for the construction of a bridge over the Michigamme River at Republic. The bridge is to be either reinforced concrete or steel truss with concrete floor.

PATOKA, ILL.—Bids will be received until 1 p. m., March 24, for the construction of a reinforced concrete bridge between East Fork and Carrigan Townships, Clinton and Marion Counties. Plans and specifications, may be seen at office of J. F. Davidson, Town Clk., Boulder, Ill.

✚JAMESVILLE, WIS.—Bids for the construction of two bridges, have been received by the City Council as follows: Racine St. Bridge, steel construction: CENTRAL STATES BRIDGE CO., (awarded contract), $14,490; Worden-Allen Co., $16,480; Milwaukee Bridge Co., $16,750; Hiel Co., $16,9[illegible]; T. McGrath Construction Co., $18,860. Fourth Ave. Bridge, steel construction: CENTRAL STATES BRIDGE CO., (awarded contract), $21,850; Hiel Co., $24,511; Worden-Allen Co., $24,560; T. McGrath Construction Co., $25,590; Hayes Bros., $25,810; Milwaukee Bridge Co., $26,950.

*KENOSHA, WIS.—Bids will be received by the Street Assessment Committee until 4 p. m., April 15, for furnishing all the material and labor required for rebuilding and altering the reinforced concrete bridge known as the "Middle St. bridge." R. H. Moth is City Engr. and M. J. Sholey, one of the Committee. For details, see advertisement in this issue.

MARINETTE, WIS.—A. L. Hillis, City Engr., has completed plans for the proposed new "Middle" bridge, to be constructed jointly by the cities of Marinette and Menominee, Mich. The engineer's estimate of the cost is $[illegible]5,000, not including approaches and street work. Plans will be submitted to the Menominee council for approval before bids are called for. Joseph Fisher is Mayor of Marinette.

+MILWAUKEE, WIS.—The Department of Public Works, Harry E. Briggs, Comr., has awarded the contract for constructing a reinforced concrete highway bridge over Kinnickinnic River at Chicago Ave., to the CZARO[illegible]TA CONSTRUCTION CO., Milwaukee, at $5,750.

ST. JOHN, KAN.—Bids will be received by the Board of Commissioners of Stafford County, until noon, April 3, for the construction of two steel and cement bridges and repairing one cement bridge. R. C. Ardrey is County Clk.

VERMILION, S. DAK.—Bids will be received by the Board of Commissioners of Clay County, until 2 p. m., March 22, for the construction of eight steel or concrete highway bridges. Theodore Anker is County Audr.

+DRAYTON, N. DAK.—The contract for constructing a bridge over Red River, has been awarded to the MINNEAPOLIS STEEL & MACHINERY CO., Minneapolis, Minn., at $49,965.

DALLAS, TEX.—Bids will be received by George L. Fearn, Arch., Dallas County, until 10 a. m., March 20, for furnishing the piling, creosoted pine and oak lumber for the approaches to the Hutchins, Wilmer and Malloy bridges.

BURLEY, IDAHO.—The State Legislature has appropriated $10,000 for the construction of a bridge across the Snake River, near Burley. The State Engineer will prepare plans immediately for a steel and concrete bridge.

MACKAY, IDAHO.—Bids will be received by the Board of Commissioners of Custer County, until April 8, for a steel bridge to be constructed across Salmon River.

SPALDING, IDAHO.—The Northern Pacific Ry. Co., will erect a steel and concrete bridge across the Clearwater River. The bridge will be 1,000 ft. long, and will take the place of an old steel and wooden bridge now in use.

STITES, IDAHO.—Bids will soon be asked by the Commissioners of Idaho County, for the construction of the bridge over Salmon River, for which $15,000 has been appropriated.

+MOUNT VERNON, WASH.—We are officially advised that the contracts for constructing a steel bridge with wooden approaches across the Skagit River, near Sedra Woolley, were awarded on March 7, as follows: J. W. GUIGG, substructure and erection, $31,190; CENTRAL STATES BRIDGE CO., steel and machinery, $25,448. The total contract price was $56,638. The other bidders, bidding on the entire contract, were: Puget Sound Bridge & Dredging Co., $75,079; American Pile Driving Co., $73,482; International Contract Co., $69,974; A. W. Tweeden & Co., $61,010; Lance & Peters, $58,867. Bowerman & McCloy, Central Bldg., Seattle, Wash., are Consult. Engrs.

VANCOUVER, WASH.—The sum of $15,000 has been appropriated for a bridge across the Lewis River, near Woodland.

MEDFORD, ORE.—W. W. Hannon, City Engr., has prepared plans for the proposed Gold Hill bridge and estimates the cost of the structure at $12,000.

LOS ANGELES, CAL.—Mayberry & Parker, Los Angeles, have been retained as designing and consulting engineers by the Board of Supervisors of Ventura County and will design eleven reinforced concrete bridges and act as consulting engineers for the erection of nine steel structures. The bridges are to be built in connection with the highway system and will be constructed across the Santa Clara River and various other streams and washes. The concrete bridges will range from one to three spans and the steel bridges will range from 100 to 1,200 feet in length. The estimated cost of the work is $232,000.

VENTURA, CAL.—Bids will be received by J. B. McCloskey, Clk., Bd. of Supervisors of Ventura County until March 28, for the construction of two bridges, one at Saticoy, to be a 9-span steel bridge, and one 3-span bridge at Pirce.

NIAGARA FALLS, ONT.—Bids will be received by John H. Jackson, Supt. of Niagara Falls, until noon, March 28, for constructing 5 steel concrete bridges and a macadam roadway, with the necessary drainage, commencing at Miller's Creek and extending to the southerly limit of the shipyard. For further information address John H. Jackson, Administration Bldg., Queen Victoria Park, Niagara Falls.

FORK RIVER, MAN.—Bids will be received by D. F. Wilson, Secy. and Treas., Massey River Municipality, until March 18, for the construction of a Howe truss bridge, with 83-ft. span, across the Fork river. Plans, etc., may be seen at office of the Minister of Public Works, Winnipeg, and at office of the municipality.

BUILDINGS.

(+Denotes that this work is advertised in Engineering News.)

BOSTON, MASS.—A 20-apartment building will be erected on Memenway St. The estimated cost is $60,000. F. A. Norcross is Arch.

BOSTON, MASS.—Bids will be received until March 27 for the construction of a school house in the Phillips Brooks District. Charles Logue is Chn. Schoolhouse Comrs., 120 Boylston St.

GARDNER, MASS.—The construction of a district court building here is proposed. The building will be 110 × 47 ft., of brick construction. C. F. Bontelle is Arch.

SPRINGFIELD, MASS.—The Board of Trustees of the Springfield Hospital Association have voted to erect two ward buildings and an addition to the nurses' home. The estimated cost is $75,000.

FAIR HAVEN, CONN.—Estimates are being received on the construction of a 3-story brick stable and storehouse, 44 × 120 ft., for J. A. McIntyre.

+GREENWICH, CONN.—It is reported that J. W. BISHOP & CO., of New York and Worcester, have been awarded the contract for the new residence, 90 × 150 ft., which Miss Laura Robinson will erect here. Blair & Carpenter, 475 Fifth Ave., New York, are the Archs. (Noted Feb. 2.)

GREENWICH, CONN.—Bids are being received on plans drawn by Rowe & Keyes, 161 Devonshire St., Boston, for a residence to be built on Putnam Ave. by E. H. Mulford, 110 Lafayette St., New York. The plans call for a house 40 × 100 ft., of wood and stucco, with tile roof, to cost about $50,000. A stable and garage will also be built.

HARTFORD, CONN.—The Board of Finance has recommended an appropriation of $600,000 for an addition to the high school. Davis & Brooks, Hartford, are preparing plans.

The Hartford National Bank is planning the erection of a 10-story bank and office building, 57 × 100 ft., at Main and Asylum Sts. The first story will be of granite and the remainder of light colored stone or brick. Donn Barber, of New York, is the Arch.

NEW HAVEN, CONN.—Delano & Aldrich, 4 East 39th St., New York, will receive bids until about April 1 for the construction of the Wright Memorial Dormitory at Yale University. The plans call for a 4-story building, 100 × 100 ft., of brick and steel, with limestone trimmings, tile roof and steam heat. The cost is estimated at $250,000.

The plans for the new Day Missionary Library on Elm St. have been completed by Delano & Aldrich, 4 East 39th St., New York, and bids are now being received for its construction. The building will be two stories high, 120 × 80 ft., of brick with marble and limestone trim, tile roof and steam heat. The estimated cost is $50,000.

ROWAYTON, CONN.—Mulliken & Moeller, 103 Park Ave., New York, are preparing plans for a new residence for J. F. Farrell at Hickory Bluff. The house will be of brick and wood, 37 × 91 ft., and is estimated to cost $50,000.

SOUTHINGTON, CONN.—Bids will be received until March 31 for the construction of a school-house here. Walter P. Crabtree, New Britain, Conn., is Arch.

AMSTERDAM, N. Y.—A business block with a frontage of 66 ft. is to be erected on East Main St. The building will have four storerooms and flats on the second floor. C. W. Johnson, Vailsgate, N. Y., is Arch.

NEW YORK, N. Y.—Construction work on the proposed Bushwick Hospital to be erected at Howard and Putnam Aves., Brooklyn, will be started soon, according to press reports. Robert H. Roy is Pres. of the Board of Directors.

Plans have been filed for the construction of a parochial school for the Church of the Transfiguration at Hooper St. The estimated cost is $100,000. The Rev. W. J. Maguire is rector.

Franklin Simon & Co. are having plans prepared for building improvements at 416 Fifth Ave. and 4 West 38th St. The building at Fifth Ave. will be five stories high and the 38th St. building will be twelve stories high.

NEW YORK, N. Y.—James C. Colgate, 36 Wall St., will construct at Madison Ave. and 41st St. a steel frame loft building, 48 × 64.7 ft. The estimated cost is $150,000. Augustus N. Allen, 511 Fifth Ave., is Arch.

The Winona Construction Co., 2228 Broadway, will erect at 36th St. and Fifth Ave. a 12-story brick and granite loft building. Schwartz & Gross, 347 Fifth Ave., are Archs. The estimated cost is $175,000.

Neville & Bagge, 217 West 125th St., are preparing plans for a 6-story apartment house to be erected on the east side of Hamilton Terrace and 141st St. The Hamilton Terrace Co., 3089 Broadway, is owner. The estimated cost is $225,000.

Ylans are being prepared by B. H. Simonson, 315 Fifth Ave., for the construction of a 9-story tenement building to be constructed at 11 Fort Washington Ave. The estimated cost is $350,000. The Fort Washington Ave. Co., 315 Fifth Ave., is owner.

Plans are being prepared by H. L. Young, 67 West 125th St., for the construction of an apartment house to be built at 122d St. and Broadway for the Friedman Construction Co. The cost is about $50,000.

The McAfee Construction Co., 339 West 84th St., is having plans prepared by J. C. Cocker, 2017 Fifth Ave., for the construction of two 5-story apartment houses at 174th St. and Audubon Ave. The estimated cost is $100,000.

+The contract has been awarded to GEORGE A. FULLER CONSTRUCTION CO., 111 Broadway, at $5,275,807, for the construction of the general post-office, to be built at 33d St. and Eighth Ave. The structure will have a frontage of 375 ft. and depth of 335 ft., three stories high and of granite construction.

+BLOOMFIELD, N. J.—The contract has been awarded to W. H. FISSELL & CO., 1133 Broadway, New York, for the construction of a brick and stone bank and office building on the southwest corner of Bloomfield and Glenwood Aves., for the Bloomfield Trust So. Mowbray & Uffinger, 56 Liberty St., New York, are the Archs.

BRADDOCK, PA.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until April 24, for the construction, complete (including plumbing, gas piping, heating apparatus and electric conduits and wiring), of the United States post-office at Braddock, Pa. Drawings and specifications may be obtained from the Custodian of site at Braddock Pa., or at office of the Superv. Arch.

PHILADELPHIA, PA.—Plans are being prepared by Charles W. Bolton & Son for the construction of an 8-story concrete loft building at the northeast corner of Broad and Race Sts.

BALTIMORE, MD.—Plans have been completed by Glidden & Fitz for the construction of a school building at the southeast corner of Warren Ave. and William St. The proposed structure will be three stories high, of red pressed brick and stone, with terre cotta trimmings. The estimated cost is $150,000.

Plans are being prepared by Emory & Nussear, Professional Bldg., for the proposed buildings for the Maryland College for Women at Lutherville, Baltimore County. Improvements will consist of dormitory, class rooms and chapel. Cost, about $50,000.

LAGRANGE, GA.—Bids will be received until 3 p. m., April 20, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction, complete (including plumbing, gas piping, heating apparatus, and electric conduits and wiring), of the U. S. post-office at Lagrange, Ga. Drawings and specification may be obtained from the custodian of site at LaGrange, Ga., or at the office of the Superv. Arch.

+JACKSONVILLE, FLA.—The SOUTHERN FERRO CONCRETE Co., Atlanta, Ga., has been awarded the contract for the construction of all the reinforced-concrete work in a warehouse to be built on Riverside Ave., Jacksonville, Fla., for Delcher Bros. W. T. HADLOW CO., of Jacksonville, are the general contractors. The building will be 72 × 170 ft.

+TAMPA, FLA.—The SOUTHERN FERRO CONCRETE CO., Atlanta, Ga., has been awarded the contract for the erection of the reinforced-concrete skeleton frame for the Hillsboro Hotel at Tampa, Fla. The structure is to be 100 × 115 ft., eight stories high, the plans having been drawn by F. M. Curtis, Arch., Tampa, Fla. The work is to begin immediately.

BROOKHAVEN, MISS.—Bids were received as follows on March 8, by the Superv. Arch., 8reasury Dept., Washington, D. C., for the construction of a post-office at Brookhaven, Miss.: King Lumber Co., Charlottesville, Ca., $54,700; Stuart & Randall, Oklahoma City, Okla., $50,575; A. Anderson & Co., St. Louis, Mo., $56,669; George W. Stiles Construction Co., Chicago, $54,700; Newport Contracting & Engineering Co., Newport News, Va., $59,243; Lisle-Dunning Construction Co., Oklahoma City, Okla., $54,448; Algernon Blair, Montgomery, Ala., $55,600; J. E. & A. L. Pennock, Philadelphia, $53,000. (Noted Feb. 2.)

NEW ORLEANS, LA.—Charles R. Kennedy will receive bids until March 16 for constructing a school building here. The building will be two stories high of brick construction.

LOUISVILLE, KY.—A 3-story brick and basement building will be constructed at 930 Fourth Ave. on the site of the Booker Reed residence by the Fourth Ave. Realty Co. The structure will be 140 × 148 ft. and contain 123 rooms.

ASHLAND, OHIO.—Bids will be received until April 3 for the erection of a school building in Ruggles Township, Ashland County.

CLEVELAND, OHIO.—Bids will be received by the Board of Education until March 20 for the construction of a technical high school here. The building will be located on Willard Ave. and West 93d St.

CLEVELAND, OHIO.—Bids will be received by the Clerk of the Board of Education until noon, April 3, for the construction complete of the brick addition to the Rockwell School Annex.

+COLUMBUS, OHIO.—The WM. H. CONKLIN CO., Columbus, Ohio, has been awarded the contract for installing a heating and ventilating system and the plumbing in the Hartman Theater.

EAST YOUNGSTOWN, OHIO.—J. S. Palmer, Clk. Board of Education, will receive bids until noon, March 25, for the erection of a brick school building here. C. F. Owsley, 522 Dollar Bank, Youngstown, is Arch.

FINDLAY, OHIO.—Bids will be received by the Board of Education until noon, March 21, for the construction of a brick and stone school building here. C. F. Latchaw is Clk.

ROSEWOOD, OHIO.—Bids will be received by the Board of Education until April 6 for the erection of a school building here.

+STEUBENVILLE, OHIO.—The officials of the Pennsylvania R. R. Co. have awarded the contract for the erection of a passenger depot to CURTHBERT BROS., Pittsburg, Pa.

WASHINGTON C. H., OHIO.—The Board of Education will open bids March 23 for the erection of a school building here.

+CRAWFORDSVILLE, IND.—W. C. CARR & SON, of this city, have been awarded the contract for constructing the Ben Hur office building at $130,000. There were 18 bidders.

HARTSVILLE, IND.—The School Board, G. W. Rominger, Chn., have ordered plans for the erection of a new high school building. Elmer E. Dunlap, State Life Bldg., Indianapolis, Ind., is Arch.

HUNTINGTON, IND.—Bids will be received about April 1 for the erection of a 3-story brick block. F. Wiekenhiser is owner.

INDIANAPOLIS, IND.—The Trustees of the Second English Evangelical Lutheran Church have ordered plans on which bids will be asked for the erection of modern brick and stone church on corner Prospect and Lindon Sts.

The Southern Lumber Co. has ordered the preparation of plans for the construction of 23 residences on Gale and Bolton Aves. Estimated cost, $100,000.

+The contract has been awarded to CALDWELL & DRAKE for the construction of a 12-story hotel building on Walnut St., between Fourth and Fifth Aves. The contract price is about $800,000.

SOUTH BEND, IND.—The First Methodist Church Trustees are preparing to erect a new $50,000 church.

SULLIVAN, IND.—Bids will soon be asked by Paul Pomter for the construction of a brick and concrete stock barn, 142 × 100 ft., to be one story high. Frank Nichols is Arch.

BATTLE CREEK, MICH.—Jas. C. Llewellyn ,164 Dearborn St., Chicago, Ill., has been commissioned to prepare plans for a ned 4-story and basement hotel to be located in Battle Creek, Mich. The estimated cost is about $150,000.

+DETROIT, MICH.—Smith, Hinchman & Crylls, 710 Washington Arcade Bldg., have awarded the following contracts for the 9-story and basement department store for the J. L. Hudson Co., Gratiot Ave. and Farmer St.: Structural iron work, to RUSSEL WHEEL & FOUNDRY CO., Chene St. and Belt Line R. R.; general contract, to the A. A. ALBRECHT CO., 820 Penobscot Bldg. The estimated cost of the building is $200,000.

+E. Schrewe, Gratiot and Seyburn Aves., has awarded the general contract for his new 5-story and basement warehouse to J. W. STOCKER, 131 Seyburn Ave.

R. E. Raseman , 1302 Penobscot Bldg., will soon take figures on a 4-story and basement store building, 44 × 100 ft., for S. Schloss, Architects' Bldg., to be located on Woodward Ave. Cost, $40,000.

The Congregation of Shaarey Zedak, A. M. Hirschman, Rabbi, are contemplating a $100,000 synagogue in the near future.

+Pollmar & Ropes, 23 Cleland Bldg., have awarded the structural iron contract for the new Parish building for the First Presbyterian Church, Rev. John Boyd, Pastor, 89 Watson St., to the PENINSULAR STEEL & IRON WORKS, of Port Huron, Mich.

A. Mueller, 804 Breitmeyer Bldg., is preparing plans for a new library building, 1½ stories high, 92 × 72 ft., to be erected at Woodward and King Aves., for the Library Commission, Ralph Phelps, Secy., 17 Butler Bldg. Commission will advertise for bids soon. Cost, about $40,000.

+FLINT, MICH.—J. Knapp and Bosworth, Coal Exchange Bldg., Wilkes-Barre, Pa., have awarded the general contract for the store and flat building, two stories and basement, 80 × 80 ft., for S. R. Ward, 10 South Main St., Flint, Mich., to WILSON & ANDERSON, 200 West Market St., Wilkes-Barre, Pa. The estimated cost is about $540,000.

HIGHLAND JARK, MICH.—Wells D. Butterfield, 614 Stovens Bldg., Detroit, Mich., has prepared plans for a new reinforced-concrete fireproof school building for the Board of Education of the village of Highland Park. The Board has an appropriation of $40,000 at hand and an additional appropriation will be allowed as the new building will cost about $55,000. Bids will be taken soon.

KALAMAZOO, MICH.—Spier, Rohns & Gehrke, 1325 Chamber of Commerce Bldg., Detroit, Mich., have been commissioned by Geo. H. Hanselman, of Kalamazoo, Mich., to prepare plans for a new 10-story and basement building, 45 × 770 ft., to be erected at Main and Burdick Sts., Kalamazoo, Mich. The building will be of reinforced-concrete construction and fireproof. Cost, about $150,000.

GRAND RAPIDS, MICH.—Williamson & Crow, 612 The Gilbert, are preparing plans for a new 10-story and basement addition to the Michigan Trust building on Ottawa St., for the Michigan Trust Co. The building will be of brick and stone, terra cotta, composition roof, structural iron, marble floors and marble tiling. Architects will be ready for figures soon.

J. Boyd Pantlind, Canal St., Grand Rapids, is contemplating a 5-story and basement addition to his hotel. Architects have not been selected. The cost of the new building will be about $300,000.

SAGINAW, MICH.—Shattuck & Hussey, 153 La Salle St., Chicago, Ill., and Asociate Architects, Wm. F. Cooper & Sons, Saginaw, Mich., will soon take figures on the new $60,000 association building to be located in Saginaw, Mich.

CHICAGO, ILL.—An apartment building will be erected on the southeast corner of Dearborn St. Bids will soon be taken by John B. Driver, 5731 Wabash Ave., owner. The estimated cost is $75,000.

Plans have been completed for the construction of an apartment building on the southwest corner of 62d St. and Ellis Ave. C. R. Gleason, 1036 East 43d St., is owner. The estimated cost is $75,000.

An apartment building will be erected on the southeast corner of South Park Ave. and 57th St. Bishop & Co., 167 Dearborn St., are Archs. The estimated cost is $75,000.

Twenty-two flats will be constructed here by Charles Chapman, 84 La Salle St. The building will be of brick construction and two stories high. The estimated cost is $110,000.

A 12-family flat building will be constructed by John J. Theis, 6044 Rhodes Ave., at 4350 Michigan Ave. The estimated cost is $60,000. Z. Davis, 17 Van Buren St., is Arch.

MT. CARMEL, ILL.—C. E. Launer, Secy. Bldg. Com., will receive bids until March 29, for constructing a Knell Fraternity Hal. Henry & Murphy, Akron, Ohio, are Archs.

PARIS, ILL.—Bids were received as follows on March 7 by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the construction of a post-office at Paris, Ill.: W. J. McAlpine, Dixon, Ill., $58,940; M. Yeager & Son, Danville, Ill., $59,918; Rogers & Kaiser, Chicago, $54,537; George W. Stiles Construction Co., Chicago, $62,324; J. N. Fairchild, Danville, Ill., $64,071; Conners Bros. Co., Lowell, Mass., $67,000.

MILWAUKEE, WIS.—The Northwestern Realty Co. is having plans prepared for the construction of a 4-story business building for stores and offices at 420-424 Jefferson St. The structure will be 60 × 120 ft., of solid brick with stone embellishments.

PLATTEVILLE, WIS.—Bids will be received until 3 p. m., April 6, by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., for the approaches at the U. S. post-office at Platteville, Wis. Drawing and specification may be obtained at the office of the custodian at Platteville, Was., at the discretion of the Superv. Arch.

AMES, IOWA.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until 3 p. m., April 17, for the construction, complete (including plumbing, gas piping, heating apparatus and electric conduits and wiring), of the U. S. post-office at Ames, Iowa. Drawings and specification may be obtained from the Custodian of site at Ames, Iowa, ar at the office of the Superv. Arch.

MAQUOKETA, IOWA.—Bids will be received until noon, March 18, by B. Crevlin, Secy. School Bd., for repairs and improvements to school in District 1, South Fork Township.

WINDOM, MINN.—Bids will be received until March 21 for labor and material necessary to construct a store building here. F. D. Orff, 615 Lumber Exchange, Minneapolis, is Arch.

YOUNG AMERICA, MINN.—Bids will be received until March 30 by the Board of Education for constructing a high school here.

ST. CHARLES, MO.—Bids will be received until March 23 by Frank J. Bull for the construction of a jail and sheriff's residence.

ST. JOSEPH, MO.—Bids will be received until March 20 by the Building Committee of the Y. M. C. A. for the construction of its building here.

ST. JOSEPH, MO.—Bids will be received by B. S. Fenn, Gen. Secy., Y. M. C. A., until March 20 for the construction of a building here. The estimated cost is $150,000. W. Boschen, St. Joseph, is Arch.

CONROE, TEX.—Bids will be received by the School Board until March 22 for the construction of a 2-story brick school building here. Taylor & Wolfe, Ft. Worth, Tex., are Archs.

✚EL PASO, TEX.—THE MILLER CONSTRUCTION CO., Pittsburg, Pa., has been awarded the contract to construct an 8-story hotel here. The cost is $1,000,000.

McKINNEY, TEX.—Bids will be received by James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., until April 21 for the construction (including plumbing, gas piping, heating apparatus, electric conduits and wiring) of the United States post-office at McKinney, Tex. Drawings and specification may be had from the Custodian of site at McKinney, Tex., or at office of the Superv. Arch.

✚WAXAHACHIE, TEX.—James Knox Taylor, Superv. Arch., Treasury Dept., Washington, D. C., has awarded the contract for the construction of a post-office at Waxahachie, Tex., to FRED TARRY & SON, Leavenworth, Kans., at $53,980. (Noted Feb. 23.)

ADAIR, OKLA.—Bids will be received until March 25 by D. C. Hughes, Clk. of the Bd. of Education, for the erection of a school here.

ENID, OKLA.—Bids will be received here by J. P. Marshall, Clk. Bd. of Educ., until March 22 for the construction of a high school building complete. M. J. Frantz is Pres. of Bd.

EUREKA, CAL.—Ackerman & Rees, Archs., have had preliminary plans approved by the School Board for a 2-story high school building to cost about $100,000.

FRESNO, CAL.—Mathewson & Clark, Archs., have been commissioned by the Fresno, Hanford & Summit Lake R. R. Co. to prepare plans for three interurban railway stations to be erected at Fresno, Kingsburg and Sanger. The Fresno building will be a 2-story brick structure to cost $50,000 and will contain the general offices of the company.

LOS ANGELES, CAL.—A. S. Heineman, Union Trust Bldg., has prepared plans for a 3-story brick building, 50 × 150 ft., class C, for the Western Lithograph Co., to be erected at Rose and Second Sts.

OAKLAND, CAL.—Reed & Meyer, Oakland Bank of Savings Bldg., are preparing plans for a 7-story, class A, bank and office building to be erected at Eleventh St. and Broadway for the Security Bank & Trust Co. The estimated cost is $200,000.

PASADENA, CAL.—The Santa Fe R. R. Co., it is reported will erect a station here to cost from $50,000 to $75,000.

PLACERVILLE, CAL.—Cuff & Diggs, Sacramento, are preparing plans for a brick and stone court-house, two stories high, to be erected here at an estimated cost of $125,000.

SACRAMENTO, CAL.—Chas. S. Kaiser, Arch., Mechanics Institute Bldg., is preparing plans for a 5-story class A bank and office building to be erected at Fourth and J Sts., for the Farmers and Merchants Bank, to cost about $200,000.

Willis Polk & Co., Merchants Exchange Bldg., San Francisco, has prepared plans for a 1-story class A, $150,000 manumental bank building to be erected at Eleventh and F Sts. for D. O. Mills.

Frye & Osborne, Archs., French Bank Bldg., San Francisco, are preparing plans for a group of seven reinforced-concrete buildings to be erected here for the Auto Manufacturing Co. Estimated cost, about $250,000.

SAN FRANCISCO, CAL.—A. I. Coffey, City Arch., Hewes Bldg., has prepared plans for a group of class A hospital buildings for the city and county of San Francisco, to be erected on Potrero St. The cost will be $1,000,000.

Frye & Osborne, French Bank Bldg., have been commissioned to prepare plans for a 4-story and basement, mill construction warehouse at Second and Tehama Sts. for the Lally Plumbing Supplies Co. to cost about $100,000.

Plans have been prepared and bids will be received shortly for the construction of a high school at Grove and Ashbury Sts. The estimated cost is $160,000. Plans by A. I. Coffey, City Arch.

Curtis Tobey, Russ Bldg., is preparing plans for a 6-story class A hotel to be erected on Lower Market St. for the Crocker estate to cost about $200,000.

✚The contract has been awarded to J. MITCHELL CO., Westbank Bldg., to erect a 6-story reinforced-concrete apartment house on Gush St. at $90,000. J. F. Dunne and D. D. Kearns, Monadnock Bldg., are Archs.

Lewis M. Gardner, Arch., 1123 Leavenworth St., has prepared plans and contracts will be awarded soon for the construction of a 6-story apartment house on North Eddy St. for the Builders Realty Co. Estimated cost, $100,000.

SELMA, CAL. — Bids are being received by M. B. Carrington, Clk. Bd. of Trustees of Union High School Dist. for constructing a concrete school here.

VALLEJO, CAL.—F. D. Voorhees, Central Bank Bldg., Oakland, has had plans approved for a high school building to be erected here. Estimated cost, $45,000.

✚QUEBEC, QUE.—JOSEPH GOSSELIN, Levis, Que., has received the contract for rebuilding the customs house here at $126,000.

WINNIPEG, MAN.—Bids will be received shortly for the dormitory building in connection with the Manitoba Agricultural College. Estimated cost, $550,000. Address Robert Rogers.

✚The CARTER-HALLS-ALDINGER CO., Winnipeg and Chicago, have been awarded the contract for the Administration Building in connection with the Manitoba Agricultural College at $229,000.

E. J. Rochon, proprietor of the Leland Hotel, is having plans prepared in Chicago for the construction of a modern 12-story hotel.

✚F. W. DOWNS, a local contractor, has been awarded the contract by the Canadian Pacific R. R. for the erection of a number of station and section houses between Port Arthur, Ont., and Broadview, Sask.

CALGARY, ALTA.—The city has decided to erect four new schools at a total cost of $486,000 during the coming summer.

CALGARY, ALTA.—Bids will be received here until March 23 for erecting stations and section houses in various places in Canada.

EDMONTON, ALTA.—An addition will be built to the Senate Hotel to cost $40,000. Mrs. M. L. Bertheaume is Prop.

Andrew Carnegie has given $75,000 for a library building here.

✚VANCOUVER, B. C.—Dominic Burns has awarded to the NORTON GRIFFITHS STEEL CO. the contract for the construction of a 12-story steel and concrete office building on Granville St., opposite the Hotel Vancouver.

✚VANCOUVER, B. C.—McDONALD & WILSON have been awarded the contract for the construction of the extra wing for the new court-house building at $348,200.

WATER SUPPLY—IRRIGATION.

(✚ *Denotes a contract awarded.*)

HOLYOKE, MASS.—Plans are being prepared by T. J. McCarthy, City Engr., it is reported, for the construction of a large dam for a storage reservoir on Mauhan Brook.

*PITTSFIELD, MASS. — Bids for furnishing, f. o. b. Pittsfield, approximately 3,800 tons of c.-i. water pipe and special castings addressed to the Clerk of the Board of Public Works, will be received at the office of the Board of Public Works until 2 p. m., March 27. The pipe is to be 14-in. to 24-in. diameter, both inclusive. A. B. Farnham is Engr. Bd.

FULTON, N. Y.—The citizens on March 2 voted to issue $25,000 of bonds for repiping a portion of the water system.

NEW YORK, N. Y.—Bids were opened as follows by Henry S. Thompson, Comr. Water Supply, Gas and Electricity, on March 1 for (a) hauling and laying water mains and appurtenances in various streets east of Park Ave., Boro. The Bronx and (b) furnishing, delivering and laying water mains in Mosholu Parkway, at intersection with Jerome Ave. and in Jerome Ave. and removing existing water mains: James Burns, 147 East 125th St., (a) $27,378, (b) $24,099; Wilton Construction Co., Elliott Ave., Williamsbridge, N. Y., (a) $24,774; Hanover Construction Co., 215 West 125th St., (a) $42,841, (b) $29,554; J. M. Rodgers, 121 West 125th St., (a) $27,277, (b) $23,888; Soraci Construction Co., 170 Broadway, (a) $40,955, (b) $34,548; L. D. Gregory, 25th St. and First Ave., (a) $20,610, (b) $25,779; Hagerty & Drummond Co., 41 Park Row, (a) $29,725; F. N. Lewis, Fourth Ave. and 21st St., (b) $29,859; Londino & Galio, Brooklyn, (b) $36,168. All bidders of New York, unless otherwise noted.

Bids were received by Henry S. Thompson, Comr. Water Supply, Gas and Electricity on March 8, as follows, for furnishing, constructing and erecting a pumping station near the existing Grant City Driven Well Plant, Boro. Richmond: W. H. C. Russell, $40,725; Weschler & Nickesch, $30,890; T. J. Buckley Construction Co., $31,204; The Masury Construction Co., $33,441; Thomas McKeown, Inc., $33,613; P. Wolf & Son, $44,861; Concord Construction Co., Brooklyn, N. Y., $29,167; Chas. H. Peckworth, $35,491; Mitchell Construction Co., $30,135; James I. Valentine, $39,374; J. F. Walsh Construction Co., $31,860; Kelly & Kelley, $31,515.

RIVERHEAD (L. I.), N. Y.—The town is considering the construction of a water plant. John Hogen is interested.

*TROY, N. Y.—Bids will be received by the Board of Contract and Supply until 11 a. m., March 31, for valves, sluice gates and appurtenances required in the construction of the Martin-Dunham reservoir; and for c.-i. pipe and specials also. Edwin L. Grimes is City Engr. Noted on March 2.

POINT PLEASANT, N. J. — The Point Pleasant Water Plant will be enlarged, including the installation of heavier mains, additional fire hydrants and a pumping plant.

*CHAMBERSBURG, PA.—Bids will be received until 8 p. m., April 7, by the Borough Council, for the construction of a diversion dam and intake chamber, a reservoir of 2,200,000-gallons capacity, and a standpipe, 10-ft. diameter and 45 ft. high. C. O. Wood is Chn. Water Com. For details, see advertisement in this issue.

CLARION, PA.—We are officially advised that the Clarion Water Co. has employed Chester & Fleming, Engrs., Pittsburg, Pa., to design and install a water filtration plant.

✚ERIE, PA.—Bids were received on March 4 by the Board of Water Commissioners for cast-iron pipe and lead. Contracts were awarded as follows: To the STANDARD CAST IRON PIPE CO., of Bristol, Pa., for pipe at $21.95 per ton and $50 per ton for specials; to the JOHN WAHL CO., of St. Louis, Mo., for furnishing lead at $4.37½ per cwt.

OIL CITY, PA.—Bids will be received until March 16 by the Water and Lighting Department for furnishing f. o. b. cars Oil City, certain material for the fiscal year commencing April 3, 1911, as follows: Tapping water mains and furnishing material for same, c.-i. pipe, flanged c.-i. pipe, special castings, valves, fire hydrants, meters and couplings. A. M. Breckinridge is City Clk.

SOMERSET, PA.—Bids will be received by C. I. Shaver, Boro. Secy., until April 5 for the construction of a concrete storage reservoir, 83 ft. in diameter and 15 ft. high. L. E. Chapin is Engr., Frick Bldg., Pittsburg, Pa.

CUMBERLAND, MD.—The City Council, on March 8, accepted the plan submitted by James H. Fuertes, Consult. Engr., 140 Nassau St., New York, for the installation of a gravity water supply system from Evitts Creek, about nine miles north of Cumberland. Estimated cost, $469,900. Noted on Feb. 9.

FREDERICK, MD.—The city has engaged William H. Boardman, Consult. Engr., 426 Walnut St., Philadelphia, to investigate the feasibility and estimate the cost of increasing the water supply.

✚DALTON, GA.—Bids were received for furnishing material and making extension to the water-works and electric light plant. The contract has been awarded to JOHN W. ASH, of Austell, Ga., at $16,500. The H. S. Jaudon Engineering Co., Savannah, Ga., is Engr.-in-Charge.

✚GAINESVILLE, GA.—The city has awarded the contract to PRATER & LODEN, of Gainesville, for erecting a brick pumping station. W. B. Eppes is City Engr.

BYHALIA, MISS.—The City Council is contemplating issuing $10,000 of bonds for the installation of a water and electric light plant. C. M. Henry is Mayor.

✚PATTERSON, LA.—Contracts for constructing water-works, it is reported, have been awarded as follows: Water tower to DANIEL JEFFERY, of Jeanerette; hydrants and valves, COLUMBIAN IRON WORKS, Chattanooga, Tenn.; underwriter fire pump, A. M. LOCKETT CO., New Orleans; c.-i. pipe and special castings, U. S. CAST IRON PIPE & FOUNDRY CO., Chattanooga. Entire cost, $30,000.

✚CANTON, OHIO.—The Board of Public Service has awarded the contract to the CHICAGO BRIDGE & IRON CO., Chicago, Ill., for constructing 1,000,000-gallon reservoir, at $23,200.

DAYTON, OHIO.—The engineering department of Dayton has surveyed a new route for the proposed new water-supply conduit. The conduit will extend from the city waterworks pumping station to the site of the reservoir, recommended near Tate's Hill, a distance of two miles. F. J. Cellarius is City Engr.

ELYRIA, OHIO.—We are officially advised that bids for laying water mains will be received by the city in about five weeks. Estimated cost, $50,000. George Weller is Supt. W.Wks. Noted on March 9.

LAKEWOOD, OHIO.—Bids will be received until noon, April 4, by the city at the office of the Clerk of the Board of Trustees of Public Affairs for constructing an elevated water tower. Estimated cost, $15,000. The W. H. Evers Engineering Co., The Arcade, Cleveland, Ohio, is Engr.-in-Charge.

✚SANDUSKY, OHIO. — The Cedar Point Pleasure Resort Co., of Sandusky, will reclaim, it is reported, several hundred acres of marsh lands skirting the shore of Sandusky Bay. The contract involves an expenditure of $25,000, and has been awarded to the GREAT LAKES DREDGE AND DOCK CO., of Cleveland, Ohio.

✚SPRINGFIELD, OHIO. — The Board of Control has awarded a contract to the U. S. CAST IRON PIPE & FOUNDRY CO., Rookery Bldg., Chicago, Ill., for furnishing 125 tons of 6-in. c.-i. pipe for water-works extensions, at $23 per ton.

✚DETROIT, MICH.—The city has awarded the contract for the new Fairview pumping station to LANGLEY & JEYNES, 68 Toledo Ave., Detroit, at $19,200. J. J. Haarer is Comr. Pub. Wks.

EAST GRAND RAPIDS (Grand Rapids post-office), MICH.—The town is considering an issue of bonds for $40,000 for the construction of a water-works and sewer system.

FLINT, MICH.—Plans are being prepared for the construction of a filtration plant for the city. H. E. Terry is City Engr.

GRAND RAPIDS, MICH.—Bids will be received at the office of the Board of Public Works, until 8 p. m., March 23, for furnishing water meters for the c[illegible] according to the plans and specification[illegible] file at the office of the Board. Sam[illegible] A. Freshney is Secy. and Gen. Mgr.

NILES, MICH.—John D. [illegible]b, 112 Clark St., Chicago, Ill., is prepa[illegible] plans for a new boiler house, tunnel a[illegible]ack for the city.

✚*APPLE RIVER, ILL.—T[illegible] contract for constructing water-works [illegible] has been awarded by the village to T. [illegible]IGLEHART, Chicago, Ill., at $15,400. B[illegible] were opened on March 1.

CHICAGO, ILL.—Bids will [illegible]eceived until 11 a. m., March 17, by the [illegible]artment of Public Works, for furnishing [illegible] delivering two 30-in. Venturi meters w[illegible] registering mechanisms at the 22d St. Pu[illegible]g Station. Bids will be received by the [illegible]rtment of Public Works, until 11 a. m., [illegible]h 18, for furnishing and delivering abou[illegible]0 tons of hydrant and stop valve castings, [illegible] be delivered at the water-works shop, [illegible]94 South Ashland Ave. B. J. Mullaney [illegible]mr. Pub. Wks.

✚JOLIET, ILL.—The City C[illegible]l on Feb. 27 awarded the contract for p[illegible]ng machinery for the new artesian w[illegible] Canal and Division Sts. to the HILL-T[illegible] PUMP CO., of Anderson, Ind., at $5,9[illegible]

NEW ATHENS, ILL.—C. A. [illegible]edinger, Chemical Bldg., St. Louis, Mo., [illegible]eparing plans for the construction of [illegible] water-works system. Estimated co[illegible] about $28,000.

TOULON, ILL.—Bids will be r[illegible]ved by the Board of Local Improvements [illegible]il 7.30 p. m., March 24, for the constru[illegible]n of a system of cast-iron water-supply p[illegible]s, with hydrants and valves, requiring ap[illegible]ximately the following quantities: 1,200 [illegible] 8-in., 8,150 ft. of 6-in., and 13,340 ft. of [illegible]-in. c.-i. pipe, 47 hydrants, two 8-in., nine [illegible]n., and ten 4-in. valves, each with box. P[illegible]ns and specifications are on file at Toulon [illegible] at the office of the W. S. Shields Co., En[illegible]s, 1201 Hartford Bldg., Chicago, Ill.

LA CROSSE, WIS.—George P. [illegible]radish, City Engr., has recommended improvements to the water distributing system. Estimated cost, about $56,000.

✚NEENAH, WIS.—The contract has been awarded to C. W. NELSON, of Neenah, for the construction of an intake and reservoir for water supply and power.

WATERTOWN, WIS.—Bids will be received by the Board of Water Commissioners until 7 p. m., March 18, for furnishing and laying c.-i. pipe and specials and constructing two manholes for the water-works system. William F. Voss, is Secy.

SHENANDOAH, IOWA.—Bids will be received by C. M. Conway, City Clk., until noon, March 20, for the construction of several lines of water mains.

CHAPPELL, NEB.—Bonds for the construction of a water-works system have been voted by the citizens.

DILLER, NEB.—On Feb. 25 the citizens voted to issue $15,000 of bonds for the construction of a water-works system. T. Smith is Village Clk.

✚WYMORE, NEB.—The City Council has awarded the contract for laying water mains to the ELKHORN CONSTRUCTION CO.

*BELLE FOURCHE, S. DAK.—Bids were received, we are officially advised, at the office of the United States Reclamation Service, Belle Fourche, on Feb. 24, for the earthwork on about 22 miles of the North Canal, involving the excavation of approximately 770,000 cu. yds. of material. The lowest bidders were Hilton & Farlowe, of Powell, Wyo., on the entire work. F. C. Magruder is Project Engr.

BRIDGEWATER, S. DAK.—We are officially advised that no contract has been awarded, bids opened on March 6, for an elevated tower and tank. It was decided not to construct them.

MORRISTOWN, S. DAK.—The city is planning for the construction of water-works. Bonds have been voted. J. P. Healey is Town Clk.

HARLOWTOWN, MONT.—We are officially advised that bids were received on March 2 as follows by the city for the construction of water-works: Lindstrom & Oren, $9,390; Gans & Anderson, $9,885; J. S. Penson, $7,749; R. M. Bardsen & Co., $7,800; William Garrard, $8,310. C. M. Thorpe is Engr., Bozeman, Mont.

*HELENA, MONT. — Bids will be received by the city until 8 p. m., April 20, for furnishing all material and the construction of a water-works system, reservoir pipe line and distribution system. The work involves headworks with concrete core wall, and approximately 14 miles of 18-in. wooden conduit, 7.4 miles of 24-in. wood conduit, .8-mile of 24-in. steel conduit, 43.4 miles of c.-i. mains, 260 hydrants, 283 gate valves, specials, etc., and a storage reservoir, lined with concrete, to hold approximately 5,000,000 gallons, together with all appurtenances; using about 2,800 cu. yds. of concrete, and requiring about 79,000 cu. yds. Class A excavation, 12,000 cu. yds. Class B excavation, 222,000 lin. ft. Class A trenching, and 16,000 lin. ft. Class B trenching. Plans and specifications, also forms of contract and proposals may be seen at the office of J. A. Mattson, City Clk., and at the office of Charles W. Helmick, City Engr.

COLUMBUS, MO.—The city will purchase through H. P. Shaw, Consult. Engr., about 44,000 ft. of 6-in. and 14,000 ft. of 4-in. c.-i. pipe for proposed extensions to the water-works. J. R. Ellis is City Engr.

MILAN, MO.—Hiram Phillips, Consult. Engr., Third National Bank Bldg., St. Louis, Mo., has been engaged by the City Council to prepare plans for the construction of a water-works system. Estimated cost, $25,000. J. W. Bingham is Mayor.

✚WEBB CITY, MO.—The Webb City and Cartersville Water Co. has awarded the contract to JOSEPH SCHNEIDER, of Monett, Mo., for the construction of a reinforced-concrete reservoir of 1,500,000 gallons capacity, at $8[illegible]. List of bidders noted on March 2.

MENA, ARK.—The city is considering the construction of a water-works district. Frank M. Jones is interested.

PORTLAND, ARK.—We are officially advised that [illegible] for the construction of new water-works and sewers are being prepared. Estimated [illegible], $35,000. Dickinson & Watkins are Consult Engrs., State Bank Bldg., Little Rock, Ark. Noted on Dec. 8 and Dec. 22, 1910.

•DALLAS, TEX. — Bids were received on March 1, [illegible] J. B. Winslett, City Secy., for furnishing, f. o. b. cars, Dallas, water meters in sizes from ⅝-in. to 1-in., inclusive, in lots of 5,[illegible] 7,500 and 10,000. The bids follow: Pittsburg Meter Co., Keystone and Eureka, ⅝-in., $8.40 each; 1-in., $16; 6-in., $375; 12-in., $900; guaranteed for two years. For 5,000 or more meters, 15% off; for 7,500 or more, 20% off; for 10,000 or more, 25% off. Crane Co., Enarc meter, ⅝-in., 6.75; 1-in., $13.20; 2-in., $41. Gamer Co., American water meters, ⅝-in., $8; 1-in., $16; 2-in., $50. For 100 to 500 meters, discount 10[illegible]; 500 or more, discount 20%. Standard Water-works Co., Sapphire meters, ⅝-in., $8.37½; 1-in., $22.50; 5-year guarantee. William H. Garrettson, Pres. National Meter Co., Crown meters, ⅝-in., $12.60; 1-in., $30.8[illegible]; 2-in., $65; 6-in., $500. Empire meter, ⅝-in., $10.60; 1-in., $23.30; 2-in., $60; 6-in., $400. Nash meter, ⅝-in., $8.60; 1-in., $16.80; 2-in., $50; 6-in., $375. Union Water Meter Co., King disc meter, ⅝-in., $6.18; 1-in., $13.48; 2-in., $40.48. Columbian meter, disc, ⅝-in., $6.02. Union rotary meter, ⅝-in., $11.88; 1-in., $22.48; 2-in., $53.98; 6-in., 376. Nilo, velocity meter, 2-in., $35.98; 6-in., $269. Neptune Meter Co., Trident disc meter, ⅝-in., $8.40; 1-in., $16.80; 2-in., $50; 6-in. Trident-Crest, $350. A. M. Lockett Co., Worthington disc meter, ⅝-in., $6.25; 1-in., $12.50. Turbine meter, 2-in., $37.50; 6-in., $300. All parts guaranteed for two years. Thompson Meter Co., Lambert meter, for 5,000, ⅝-in., $7.80; 1-in., $15.12; for 7,500 meters, ⅝-in., $7.60; 1-in., $15.12; for 10,000 meters, ⅝-in., $7.40; 6-in., $15.12. Any number of meters, 2-in., $45; 6-in., $337.

•LUFKIN, TEX.—Bids will be received by Hon. C. N. Humason, Mayor, until noon, Mar. 24, for the following: Two 100-HP. return tubular boilers; two boiler-feed pumps; 200-HP. open-type feedwater heater; compound duplex pumps; condenser and wet vacuum pump; two 75-HP. motors. O'Neill Engineering Co., Dallas, Tex., is Engr.

MISSION, TEX.—See item under Manufacturing Plants.

+SNYDER, TEX.—The city has awarded the contract to the FOUNTAIN-SHAW ENGINEERING CO., Andrews Bldg., Dallas, Tex., for constructing the water-works system.

+HASKELL, OKLA.—The contract for constructing water-works from the plans by James P. Gates, of Wagoner, Okla., has been awarded to F. R. STONE, at about $28,200.

MUSKOGEE, OKLA.—Alexander Potter, Consult. Engr., 116 Liberty St., New York, is preparing plans for the construction of a system of water-works for Muskogee. The work will include an intake not less than 48-ins. in diameter, purification plant of 6,000,000 gallons capacity, reservoir of 4,000,000 gallons capacity, 11,700 ft. of 24-in. c.-i. pipe and 9,500 ft. of 16-in. iron pipe. Bids will be received in about two months. Estimated cost, $490,000.

WELCH, OKLA.—The Cooke-Gregory Engineering Co., Keystone Bldg., Joplin, Mo., is preparing preliminary plans for the construction of a water-works system here. J. H. Van Arsdale is City Clk.

FORT LUPTON, COLO.—The city is considering the construction of a water-works system. Estimated cost, $25,000.

+LAMAR, COLO.—It is reported that L. M. Markham has completed preliminary surveys for the Bent and Prowers Irrigation District, from the Purgatoire River on the west, beginning about 18 miles south of Las Animas to Clay Creek, ten miles east of here. Final plans will be prepared and construction commenced within 60 days. The main storage reservoir will be located on the Purgatoire River, and will have a capacitl of about 90,000 acre-ft. of water. The main canal will be about 120 miles long. The district embraces nearly 100,000 acres of land in southern Bent and Prowers Counties. The district has voted bonds for $4,000,000. The contract for constructing the entire system has been awarded, it is stated, to the SOUTHWEST CONSTRUCTION CO., of Lamar.

AZTEC, N. MEX.—W. S. Walker, of Aztec, is considering the construction of an irrigation system near here to water 2,500 acres of fruit land.

ROSEWELL, N. MEX.—The Directors of the Rio Hondo Water Users' Association of this city have secured a government loan of $60,000 for the construction of a concrete irrigation project. Sixteen miles of ditches and canals will be constructed, together with power plants, reservoirs and pumping stations.

TUCUMCARI, N. MEX.—The City Council is considering the purchase of the local water-works plant and distributing system. A price of $50,000 has been set upon the property, it is stated.

SALMON CITY, IDAHO.—The citizens, it is reported, have decided to purchase the present water-works for $30,000 and spend about $20,000 for improvements.

+OGDEN, UTAH.—We are officially advised that the contract has been awarded to the J. P. O'NEILL CONSTRUCTION CO., of Ogden, for the construction of the Cold Water Canyon conduit, at $67,463. Bids were opened on Feb. 27. List of bidders and itemized bids noted on March 9.

+PHOENIX, ARIZ. — The Secretary of the Interior has awarded the contract to the B[illegible]ON JACKSON IRON WORKS, San Francisco, Cal., for furnishing six centrifugal pumps for use on the Salt River irrigation project, Ariz. The contract price f. o. b. cars at Berkeley, Cal., is $7,845. Contract has also been awarded to the WAGNER ELECTRIC MFG. CO., of St. Louis, Mo., for furnishing six motors and transformers for these pumps at $7,778 and to the WESTINGHOUSE ELECTRIC & MFG. CO. of Chicago, Ill., for furnishing switchboards.

MORRISON, WASH.—A bill has been introduced in the Legislature providing for the sum of $15,000 to complete the survey of the Quincy Flats in Grant County, which will result in opening 290,000 acres of land. The Quincy Valley Waters Users' Association, of Morrison, is interested.

NORTH YAKIMA, WASH.—The Yakima Valley Canal Co., it is reported, has authorized a bond issue for $75,000 for improvements on the Congdon Canal. The whole canal will be rebuilt, the wooden flume will be replaced with steel and the ditch will be concreted. The sum of $12,000 to be expended this spring and $25,000 next fall. The balance will be used as the work progresses.

TACOMA, WASH.—Contracts will soon be awarded by the Board of Public Works for the construction of a reservoir and other units comprising the Green River gravity water system. Nicholas Lawson is Comr. Light and Water.

ASTORIA, ORE.—Bids will be received by the city until March 31 for the construction of a gate well and high-service distribution system for supplying the hill portion of the city. It will be built on the property recently purchased by this municipality one mile east of the reservoir now in use, as the site for a 20,000,000-gallon reservoir. The gate well to be built will be 32 ft. in depth and 20 ft. in diameter, with a capacity of 63,000 gallons. This improvement will include the construction of 14,000 ft. of 4-inch. iron pipe and the placing of 14 hydrants. The line of pipe will be built along the following route: James St., extension to 16th St., north on 16th St. to Niagara Ave., west on Niagara Ave. to Eighth St., north on Eighth St. to Kensington Ave., east on Kensington Ave. to 14th St., south on 14th St. to Lexington St., east on Lexington St. to 15th St., and south on 15th St. to Niagara Ave.

HERMISTON, ORE.—The City Council is planning to construct a distributing system. The work will include a reservoir and pumping plant south of the town.

PENDLETON, ORE.—Bids will be received at the office of the Board of Trustees of the Eastern Oregon State Hospital, Capitol Bldg., Salem, Ore., until noon, March 20, for laying a pipe line, 4,500 ft., for water supply to Eastern Oregon State Hospital, according to plans filed with the Clerk of the Board at Executive Office, Capitol Bldg., Salem, and with Charles A. Murphy, Supt. of Construction, at Pendleton.

THE DALLES, ORE.—The Water Commissioners will spend $10,000 for improvements to the city reservoir, and $10,000 for pipe lines from the "Meadows." Bids will be asked soon for relining the open reservoir, and four miles of 20-in. wooden pipe will be laid.

TOLEDO, ORE.—The City Council is planning for the construction of the proposed water-works system.

EMERYVILLE, CAL.—See item under Streets and Roads.

HOLTVILLE, CAL. — The citizens have voted $6,000 of bonds for the construction of a municipal water system. F. C. Main is City Clk.

+MADERA, CAL.—The City Trustees have awarded the contract to F. C. ROBERTS & CO., 461 Market St., San Francisco, Cal., for the construction of the proposed water system complete, at $47,046. Bids were opened on Feb. 20. List of bidders noted on March 9.

+OCEANSIDE, CAL.—The city has awarded the contract to the U. S. CAST IRON PIPE & FOUNDRY CO., of San Francisco, Cal., for furnishing c.-i. pipe and fittings for the water-works system, at $34.15 per ton for pipe, and $63 for fittings. Total cost, $14,000.

ONTARIO, CAL.—Bids will be received until 7.30 p. m., March 20, by R. O. Breckenridge, Town Clk., for constructing a pumping plant for the domestic water system. The bids will be received as follows: (a) For pumping plant complete; (b) for plant to raise water to reservoir; (c) for plant to raise water from Fourth to Eighth St. reservoir, and (d) for building. F. E. Traeh is Consult. Engr., Homer Laughlin Bldg., Los Angeles, Cal.

PUENTE, CAL.—The Puente Land & Water Co. will be incorporated soon and will begin the construction of cement flumes to replace the open ditches. Estimated cost, $20,000.

SAN FRANCISCO, CAL.—Bids will soon be asked by the Board of Public Works for the construction of fresh-water pumping stations. Marsden Manson is City Engr.

SANTA ANA, CAL.—The City Engineer is preparing plans for the construction of a concrete reservoir. Estimated cost, $20,000.

+TURLOCK, CAL. — The City Trustees have awarded the contract to WILLIAM HEAFEY, Chestnut and Pierce Sts., San Francisco, Cal., at $16,431, for extensions to the municipal water system. The Trustees have also awarded contract to EDWARD E. PAXSON, of Turlock, for constructing extensions to the municipal sewer system, at $48,668.

VALLEJO, CAL.—The Board of City Trustees has approved the plans and specifications for laying the new 14-in. water main from Fleming Hill to this city, and the 8-in. main from Georgia St. to Fourth St., South Vallejo. E. P. Noyes is City Engr.

MONCTON, N. B.—We are officially advised that the city will install a new water system. Estimated cost, $250,000. E. Albert Reilly is Mayor.

CHAPLEAU, ONT.—Bids will be received until March 27 by T. J. Godfrey, Town Clk., for furnishing and installing duplex steam pumping engine with a capacity of 800 gallons per min. and a return tubular boiler. Chipman & Power, are Engrs., 204 Mail Bldg., Toronto, Ont.

+HAMILTON, ONT.—The city has awarded the contract to CHADWICK BROS., of Hamilton, for furnishing compression stop and corporation cocks, and 50 hydrant drop valves.

•WELLAND, ONT. — Bids will be received by the city until noon, April 3, for the construction, delivery and erection in place in Welland, of one unit of water-power driven water-works pumps, 3,000,000 Imperial gallons daily capacity, including turbine, pipes, valves, etc. Specifications, prepared by William Kennedy, Jr., Engr., Montreal, may be obtained from R. Cooper, Chn. Water Comrs.

ROULEAU, SASK.—Bids will be received by W. H. Stewart, City Secy.-Treas., until April 4 for pumping machinery, electrical machinery, pole line, etc., producer gas plant, c.-i. or steel water mains, valves, etc. J. Darlington Whitmore is Engr., Willoughby & Duncan Block, Regina, Sask.

SASKATOON, SASK.—Bids will be received until March 24, by the city for the supply of tile, iron and lead pipe, brass fittings, service boxes, meters and tapping machines.

SEWERS.

(**Denotes that this work is advertised in Engineering News.*)

NEW BEDFORD, MASS.—This city has retained Metcalf & Eddy, 14 Beacon St., Boston, Mass., as consulting engineers in connection with its proposed installation of an intercepting and outfall sewer.

BINGHAMTON, N. Y.—Plans for the construction of intercepting sewer to carry the sewage of the entire city to a disposal plant located below the city limits, have been approved by the State Board of Health. The permit issued by the Commissioner stipulates that the interceptor and sewage disposal plant be in full operation by Sept. 1, 1914. Geo. L. Robinson, 37-39 East 28th St., New York City, was consulting engineer and designed the disposal works, and John A. Giles, City Engr., designed the intercepting sewers and made the surveys.

FRANKFORT, N. Y.—Plans are being prepared by Vrooman-Perry, Gloversville, for the construction of a sewer system and disposal plant.

+JAMAICA, (L. I.), N. Y.—THE LITCHFIELD CONSTRUCTION CO. has been awarded a contract to construct a sewer and appurtenances in Liberty Ave., from Lefferts Ave. to Stoothoff Ave., and in Stoothoff Ave., from Liberty Ave. to Beaufort Ave., Morris Park. The cost is $51,395.

NEW YORK, N. Y.—Bids will be received until 11 a. m., March 22, by Alfred E. Steers, Pres. Boro. of Brooklyn, Room 2, Boro. Hall, for furnishing labor and materials necessary to construct a sewer in 56th St., between Eleventh and Fort Hamilton Aves., with an outlet sewer in Eleventh Ave., between 56th and 57th Sts.; and for furnishing labor and materials necessary to construct a sewer in Riverdale Ave., between Saratoga Ave. and Grafton St.; for labor and material required for sewer basins at the north and west corners of 43d St. and Ninth Ave.; for labor and material required for a sewer in Germania Place., between Kenilworth and Amersfort Places; for furnishing all the labor and material required for constructing a sewer in Dumont Ave., between Saratoga Ave. and Grafton St.

Bids will be received by Alfred E. Steers, Pres. Boro. of Brooklyn, Room 2, Boro. Hall, until 11 a. m., March 22, for furnishing labor and material necessary to construct sanitary and storm sewers in Williams Ave., from Vienna Ave. to Hegeman Ave.; and for furnishing labor and materials for a sewer in Dumont Ave., between Grafton St. and Howard Ave., and an outlet sewer in Howard Ave., between Dumont Ave. and East 98th St.; for furnishing labor and material for a sewer in 68th St., between Twelfth and Thirteenth Aves.; for furnishing all labor and material for a sewer in Thirteenth Ave., between 63d and 65th Sts.; for furnishing all labor and material required for constructing a sewer basin at the northeast corner of Fulton St. and Euclid Ave.; for furnishing all the labor and material required for constructing sewer basins at the north and west corners of Bay 25th St. and Benson Ave., and at the north corner of Bay 25th St. and Cropsey Ave. Plans and specifications may be obtained at the office of the Bureau of Sewers, 215 Montague St., Brooklyn.

HOBOKEN, N. J.—Bids will be received by the City Council until March 22 for constructing a drain and water connection from the public comfort house in Elysian Park.

ALTOONA, PA.—Bids will be received until April 1 for the construction of sewers here. F. Engstrom is City Engr.

•CHAMBERSBURG, PA.—Bids will be received by the Borough Council until 8 p. m., April 10, for constructing a sewer here. S. K. Shryock is Chn. Sewer Com.

MONONGAHELA, PA.—Chester & Fleming, Engrs., Pittsburg, Pa., have been employed by the Liggett Spring & Axle Co., Monongahela, Pa., to install a sewage disposal plant for their works and houses here.

WILLIAMSPORT, PA.—Bids will be received until March 17 for the construction of a storm water sewer. J. J. Galbraith is City Clk. The estimated cost is $25,000.

COLONIAL BEACH, VA.—The town of Colonial Beach, which recently voted to issue $37,000 in bonds to build a water and sewerage system, has engaged Harry Stevens, Consult. Engr., Union Trust Bldg., Washington, D. C., to prepare the plans. Bids for the construction will be received as soon as same are completed.

CLEVELAND, OHIO.—Bids will be received until 11 a. m., April 15, by John Goldenbogen, Clk. Bd. of Comrs., for the construction of sewers in Warrensville Township.

IRONTON, OHIO.—Bids will be received until noon, March 16, for the construction of an 8-in. sewer in Walnut Alley, from Vernon to Washington Sts. F. A. Ross is Clk.

MASSILLON, OHIO.—See item under Streets and Roads.

RAVENNA, OHIO.—We are officially advised that the extension of sanitary sewers here is contemplated. Edward Hollister is Supt. Sewerage.

+SPRINGFIELD, OHIO.—According to press reports the contract has been awarded to HUONKER & WILLIAMS for the construction of a number of sewers in the southeast section of Springfield.

WARREN, OHIO.—See item under Streets and Roads.

+ELKHART, IND.—FRANK J. MILLER, Elkhart, Ind., has been awarded the contract for constructing a sewer one mile long at $6,782.

ALLEGAN, MICH.—Bids will be received until April 1 for the construction of the Depot Hill sewer. John W. Peet is City Clk.

DETROIT, MICH.—The Common Council of the city of Detroit at their meeting of March 8 directed the Department of Public Works, J. J. Haarer, Comr., 104 City Hall, to advertise for bids for the construction of the following vitrified brick lateral sewers: Laterals sewer No. 2186, in alley in block bounded by Mullane and Whittaker Aves., Springwells and Senator Sts., estimated cost per lin. ft., $1.30; lateral sewer No. 2187, in alley in block bounded by Mullane, Springwells, Whittaker and Ferndale Aves., estimated cost per lin ft., $1.30; lateral sewer No. 2200, in alley in block bounded by city limits, Beechwood, Allendale and Seebaldt Aves., estimated cost per lin. ft., $1.50; lateral sewer No. 2201, in alleys in block bounded by city limits, Beechwood, Larchmont and Seebaldt Aves., estimated cost per lin. ft., $1.50; lateral sewer No. 2202, in alley in block bounded by city limits, Beechwood, Tireman and Larchmont Aves, estimated cost per lin. ft., $1.50.

CHICAGO, ILL.—Bids will be received until 11 a. m., March 18, for 200 tons of c.-i. valve basin and fire cistern covers, at the various pipe yards. B. Mullaney is Comr. of Pub. Wks.

GALVA, ILL.—Bids will be received by E. O. Engstrand, City Clk., until March 25 for the construction of a sewage disposal plant consisting of about 1,250 ft. of 10-in. tile outlet sewer, concrete and brick tank with sludge pipes, valves, dosing tanks and a trickling filter. W. S. Shields Co., 1201 Hartford Bldg., Chicago, are Engrs.

BELOIT, WIS.—Bids will be received until March 17 for the construction of about 8,000 ft. of 8-in. sewer. Robert Caldwell is City Engr.

+EVANSVILLE, WIS.—It is reported that the Common Council will award the contract for sewer work to the lowest bidder, ROBERT NELSON, Racine, Wis., at $16,459. Work consists of laying 7,936 lin. ft. of 8-in. sewer, 5,491 lin. ft. of 10-in. sewer, 450 lin. ft. of 12-in. sewer, 223 lin. ft. of 15-in. sewer, 3,303 lin. ft of 18-in sewer, 42 manholes, 2 septic tanks, inverted syphon Other bidders were: A. C. Schreiter, Manitowoc, Wis., $24,904; R. J. Hickey, Milwaukee, $24,768; H. Hohensee, Milwaukee, $23,810; W. O. Bahr, Manitowoc, $22,571; F. C. Robinson, Manitowoc, $22,247; Sweeney Bros., Reedsburg, $21,518; F. E. Kaminski, Watertown, $19,967; E. R. Harding, Racine, $19,838; N. F. Reichert, Racine, $19,530; J. T. Blake, Madison, $19,277; Robert Nelson, Racine, $16,458.81.

•KENOSHA, WIS. — Bids are asked until 2 p. m., April 15, by the Street Assessment Committee for furnishing the labor and material required for the construction and completion of a main trunk sewer. M. J. Scholey is one of the Committee. For details, see advertisement in this issue.

+OCONOMOWOC, WIS.—The Common Council has awarded the contract for laying approximately 2½ miles of sewers to MULHOLLAND & SON, Kaukauna, Wis., at $11,500.

RACINE, WIS.—The Board of Public Works will receive bids until March 18 for the construction of a sewer in Ninth St. and Lockwood Ave. P. H. Connolly is City Engr.

+STOUGHTON, WIS.—E. R. HARDING CO., Racine, Wis., has been awarded the contract for constructing a sewerage system here at $69,999.

WATERTOWN, WIS.—Bids will be received by the Board of Public Works until March 18 for the construction of a sanitary sewer here. Arnold Kraeft is City Engr.

SIBLEY, IOWA.—Bids will be received until March 28 by the Board of Supervisors for constructing a sewer system in District 11. V. A. Burley is County Audr.

ST. PAUL, MINN.—Bids will be received by the Board of Public Works until 2 p. m., March 20, for the construction of sewers in Sims and George Sts. R. L. Gorman is Clk.

Bids will be received until March 16 by the Board of Public Works for the construction of a sewer in Osceola Ave., between Oxford St. and Lexington Ave.

+ABILENE, KAN.—SNYDER & PETERSON, Guy Hall, Abilene, have been awarded by the City Council a contract for the construction of a storm sewer here.

FORT LEAVENWORTH, KAN.—Bids will be received in triplicate until noon, March 31, for the construction of approximately 8,500 ft. of sewers, of which 2,400 ft. is to be c.-i. pipe. Information may be obtained from Capt. J. E. Normoyle, Const. Q. M., U. S. A.

GLASGOW, MONT.—Plans have been prepared by the City Engineer for the extension of sewers in Districts 3 and 4, and will be presented to the City Council at their next session. Estimated cost, $25,000.

TEMPLE, TEX.—An ordinance has been passed by the City Council providing for the extension of the Temple sewer system and various other street improvements.

HOLDENVILLE, OKLA.—Bids will be received until 5 p. m., March 22, at the office of I. A. Draper, City Clk., for construction of district and lateral sewers in various districts.

SNOHOMISH, WASH.—Bids for the construction of a sewer system here will be received by the city until March 21.

SPOKANE, WASH.—A resolution has been passed by the City Council authorizing the preparation of plans for the installation of the Fourth Ward trunk sewer No. 4. The sewer will run from Adams and Gardner Sts. to the alley between Knox and Shannon Aves. The estimated cost is $44,115. Morton Macartney is City Engr.

NEWPORT, ORE.—We are officially advised that Louis C. Kelsey, Selling Bldg., Portland, Ore., has been engaged as consulting engineer in the designing and construction of a sanitary sewerage system for the city of Newport. F. B. Davis is the City Engr.

CALEXICO, CAL.—The following bids were received by the Board of City Trustees for the construction of a municipal sewer system: Wattson & Spicer, $26,787; California Ornamental Brick Co., $31,468; R. N. Nikcevich, $31,222.

CORNING, CAL.—Plans are in the course of preparation for the construction of a complete sewer and water system. The estimated cost is $70,000.

✚LONG BEACH, CAL.—S. ZARUBICA, of Los Angeles, has been awarded the contract for the construction of a sewer in District No. 7, at $7,889.

LONG BEACH, CAL.—The City Engineer has submitted plans to the City Council for the proposed municipal sewer system to cost $343,454.

✚LOS ANGELES, CAL.—The contract has been awarded to GEORGE A. ROGERS for the construction of a sewer complete in Savanah and other streets at $26,873.

SAN FRANCISCO, CAL.—The Board of Public Works has recommended the construction of sewers in Lincoln Ave., from Fourteenth Ave. to La Playa Ave. The estimated cost is $125,000.

SAUSALITO, CAL.—Plans are being prepared by the City Engineer for extensions to the municipal sewer system.

TERRE BELLA, CAL.—Irving H. Althouse, City Engr., has prepared plans for the construction of a septic sewer system here. Bids will be received soon. The estimated cost is $9,000.

TORONTO, ONT.—O. W. RICE, Toronto, has been awarded the contract for the construction of storm overflows for sewerage tanks at 30 cts. per lin. ft.

SASKATOON, SASK.—Bids will be received until noon, April 14, for concrete sewer pipe to be delivered f. o. b. at the side of trench according to plans and specifications on file at the office of Engineering News, New York.

CALGARY, ALTA.—The city has arranged for the expenditure of $318,000 for a trunk sewer this summer.

GARBAGE DISPOSAL.

(*✚ Denotes a contract awarded.*)

PITTSBURG, PA.—Bids were received as follows on Feb. 20 for the collection and disposal of the city's garbage: American Reduction Co., of Pittsburg, for collecting the rubbish of old Pittsburg, at $185,700; Allegheny Garbage Co., of Pittsburg, for taking care of garbage on the Northside, $66,500.

LOUISVILLE, KY.—We are officially advised that the Board of Public Works is considering the installation of a garbage disposal plant to take the place of the present unsatisfactory method of garbage disposal by dumping, and desires communication with any persons or firm who might be interested in this proposition. D. R. Lyman is Ch. Engr. Bd.

MASON CITY, IOWA.—The Committee on Sanitation is investigating the feasibility of constructing a garbage incinerator.

ST. LOUIS, MO.—The city is considering the construction of a new steel scavenger dump barge, 36 ft. beam, 100 ft. long, 2-ft. draft. Estimated cost, $9,500. W. B. Dryden is Secy. Bd. Pub. Improvements.

STREETS AND ROADS.

(**Denotes that this work is advertised in Engineering News.*)

BOSTON, MASS.—Bids will be received by J. E. Mullen, Supt. Supply Dept., Tremont Bldg., Boston, until March 22, for flagging to be used by the city for one year.

NEWPORT, R. I.—Bids will be received at the Bureau of Yards and Docks, Navy Dept., Washington, D. C., until 11 a. m., April 1, for constructing macadam road, gutter, catch basins, granolithic walk and concrete curb, at the U. S. Naval Station, Newport. Specifications are on file at the office of Engineering News, New York.

BRIDGEPORT, CONN.—See item under Electric Railways.

PUTNAM, CONN.—See item under Miscellaneous Contracts: Stone Crusher, etc., Putnam, Conn.

ALBANY, N. Y.—The bids received by C. E. Treman, Supt. Pub. Wks., on Feb. 27, for the construction of highways adjacent to the Delta Reservoir in Oneida County, N. Y., have been rejected. New bids will be received until noon, March 23. Noted on Feb. 9.

BUFFALO, N. Y.—Bids will be received by the Dept. of Pub. Works until March 23 for repaving Washington St., 42 ft. wide, from Genesee St. to Chippewa St.; repaving Goodell St. 30 ft. wide, from Michigan to Cherry Sts.; Lamont St., 26 ft. wide, from Ontario St. to Howard St., and Krupp St., 28 ft. wide, from Ashley St. to end of the street. Plans and specifications and estimate of quantities are obtainable from the Engineering Bureau. Bids are wanted for each kind of paving, of which specifications have been filed by Francis G. Ward, Comr. Pub. Wks.

*MADISON BARRACKS (Sacketts Harbor Postoffice) N. Y.—Bids will be received by the Constructing Quartermaster until 2 p. m., April 10, for the construction of about 28,800 sq. ft. of macadam road and 800 sq. ft. of concrete walk.

NEW YORK, N. Y.—The annual appropriation of $3,000,000 for the repaving of streets was made by the Board of Estimate. It is in the form of corporate stock, and does not require the approval of the Board of Aldermen. The apportionment of the repaving money among the boroughs was as follows: Brooklyn and Manhattan, each $1,000,000; Bronx and Queens, each $350,000; Richmond, $300,000. If the extra million dollars is voted later on, Brooklyn will get $200,000 more and Manhattan an additional $250,000, Queens and Bronx will get $250,000 and Richmond another $50,000.

Resolutions have been passed for widening the following streets: 23d St., between Second and Seventh Aves.; 34th St., between Sixth and Madison Aves.; Second Ave., between Houston and 23d Sts. Work on removing the encroachments in these streets will be started about April 1.

Bids will be received by Charles B. Stover, Pres. Park Bd., until 3 p. m., March 23, for furnishing 1,000 bbls. emulsifying road sprinkling oil. Blank forms may be obtained at the office of the Department of Parks, Boroughs of Brooklyn and Queens, Litchfield Mansion, Prospect Park West and Fifth St., Prospect Park, Brooklyn.

Bids will be received by the Park Board, Dept. of Parks, until 3 p. m., March 23, for paving with asphalt tiles the ends of the parks in Broadway, between 110th and 122d Sts. Plans may be seen and blank forms obtained at the office of the Department of Parks, Arsenal, Central Park, New York.

NEW YORK, N. Y.—We are officially advised that the lowest bid received for furnishing all the labor and materials required for regulaitng, grading and paving the South St. ferry approach, and for constructing subway ducts at the St. George Ferry, was submitted by the Uvalde Asphalt Paving Co., 1 Broadway, New York, at $9,054. The other bidders were: Atlanta Contracting Co., $11,690; Joseph Johnson Sons, $9,470; M. Di Menna, $9,287; Frank J. Gallagher, $11,500; J. A. Donovan, $9,995; Thomas Tarpey, $11,375.

Bids will be received by Alfred E. Steers, Pres. Boro. Brooklyn, until 11 a. m., March 22, for furnishing and delivering 200,000 gallons of asphalt road oil, and 10,000 wood paving blocks (5,000 to be 4 ins. wide and 3½ ins. deep and 5,000 to be 3 ins. wide and deep; blocks to be 8 ins. long). Blank forms and further information may be obtained at the office of the Bureau of Highways, the Boro. of Brooklyn, No. 14 Municipal Bldg.

Bids will be received by George McAneny, Pres. Boro. Manhattan, until 2 p. m., March 21, for regulating, paving, repaving, curbing and widening several streets in the Borough of Manhattan.

Bids will be received by Cyrus C. Miller, Pres. Boro. The Bronx, until 11 a. m., March 21, for paving, regulating, grading, setting curbstones, flagging sidewalks, laying crosswalks, and building approaches on various streets.

*POUGHKEEPSIE, N. Y.—Bids will be received by the Board of Public Works until 4 p. m., March 30, for constructing 13,000 sq. yds. of brick pavement. Robert J. Harding is Supt. Pub. Wks.

BLOOMFIELD, N. J.—Bids will be received by R. F. Davis, Town Clk., until 8 p. m., March 20, for constructing bluestone sidewalks on various streets.

JERSEY CITY, N. J.—Bids will be received by J. C. Sweeney, Clk. Boulevard Comn., Hudson County, until 3.30 p. m., March 16, for reconstructing various sections of Hudson Boulevard.

✚JERSEY CITY, N. J.—We are officially advised that the contract for repaving Jackson Ave. between the north line of Kearney Ave. and the north line of Claremont Ave., on 6-in. concrete base, was awarded on March 13 to VAN KEUREN & SONS at 79% of the estimated cost. George Bouton is City Clk.

NEWARK, N. J.—The lowest bids received by the Board of Street and Water Commissioners on March 9, for paving various streets in the city, were as follows: For paving Astor St. with brick, McMahon Construction Co., $14,282; for paving West End Ave. with asphalt block, Hastings Pavement Co., $13,420; for paving Seymour Ave. with brick, Newark Paving Co., $4,257.

NEWARK, N. J.—Bids will be received by the Board of Street and Water Commissioners until March 23 for paving the following streets: Gouverneur St., from Mt. Pleasant Ave. to Passaic St., with granite; estimated area, 1,840 sq. yds. Renner Ave., from Elizabeth to Seymour Ave., with bitulithic pavement, 9,240 sq. yds. South 18th St., from Clinton to South Orange Ave., with bitulithic pavement, 28,200 sq. yds. All pavements to be laid on a 6-in. concrete foundation.

PATERSON, N. J.—The city is considering the improvement of Mill St., from Van Houten to Market St., and the Ellison St. extension. Harold J. Harder, City Engr., estimates the cost of the improvement at $42,000.

SWEDESBORO, N. J.—Bids will be received by Wilmer Egee, Mayor, until 10.30 a. m., April 15, for constructing a road on Railroad Ave., beginning at Main St. and extending to the right-of-way line of the West Jersey and Seashore R. R., a distance of 859 ft.

ALTOONA, PA.—Press advices are to the effect that bids will soon be asked for paving to cost $75,000.

HARRISBURG, PA.—Surveys are being made for considerable street improvements, the total amount approximating 300,000 sq. yds.

YORK, PA.—Bids will be received until noon, March 17, by S. W. Bahn, Chn. Highway Com., for paving the following streets: With bitulithic, South Hartley St., from Market St. to Salem Ave.; South Richland Ave., from Market to Princess St.; with vitrified bricks on a concrete base, compressed concrete, bitulithic, sheet asphalt, wood blocks, or any other known or approved paving material, East Gas alley, from Duke St. to Court alley, and West Philadelphia St., from Newberry to Hartley St. Specifications can be secured from the City Engineer.

FORT HOWARD, MD.—Bids will be received until 11.30 a. m., April 7, for constructing concrete walks.

✚LYNCHBURG, VA.—A contract has been awarded to S. B. BENNINGTON, Lynchburg, at $16,517.30 for constructing tar macadam paving on Wise St. from 14th St. to Park Ave.

✚NORFOLK, VA.—We are officially advised that a contract has been awarded to the UNITED STATES WOOD PRESERVING CO., 29 Broadway, New York, for paving Bank St. from Freemason to Queen Sts., at $2.85 per sq. yd. for wood block pavement. The total bid was $13,000.

WASHINGTON, VA.—Bids will be received by the Clerk of Rappahnock County, Washington, Va., March 29, for the construction of about 7½ miles of macadam road from Flint Hill to the Warren County line. Plans and specifications are on file at the office of P. St. J. Wilson, State Highway Comr., Richmond, Va.

GREENVILLE, S. C.—The county is considering the paving of Buncombe Road to the Five-Mile post. J. P. Goodwin is Supervisor, Greenville County.

✚BIRMINGHAM, ALA.—The contract for paving Ave. F has been awarded to the SOUTHERN BITULITHIC CO., at $45,000.

Bids will soon be asked for paving 26th St., from Highland Ave. to Ave. F.

✚EUTAW, ALA.—The contract for paving the public square and down Main St. to the intersection with Prairie St., has been awarded to the TUSCALOOSA CONCRETE & CONSTRUCTION CO., at about $12,000.

WETUMPKA, ALA.—Bids will be received by the Commissioners of Elmore County until 11 a. m., April 4, for grading and surfacing about 30 miles of sand-clay road to be built between Elmore, Wetumpka and Tallahassee, together with necessary drain pipe and concrete culverts. Plans, profiles and quantities are on file at the courthouse, Wetumpka, Ala., and in the office of Solomon-Norcross Co., 1622 Candler Bldg., Atlanta, Ga.

CHATTANOOGA, TENN.—Hamilton County has voted to issue bonds for $500,000 for the development of a system of highways for the county. R. B. Cooke is Road Comr.

KNOXVILLE, TENN.—Bids will be received by the City Recorder until April 5 for paving Central and Eleanor Sts. J. E. Thompson is City Engr.

BELLE VALLEY, OHIO.—Bids will be received at the office of the Township Clerk of Noble Township until noon, March 28, for grading and paving with brick nine miles of road in Noble Township. Specifications, plans and profiles are on file in the office of the Township Trustees in Belle Valley, Ohio. Estimated cost of construction, $10,925. S. G. Brown, Caldwell, Ohio, is Engr.

BUCYRUS, OHIO.—Bids will be received by the Director of Public Service until noon, March 23, for furnishing the necessary labor and material for improving Walnut St., from Oakland Ave. to Southern Ave., by paving with paving brick, Trinidad pitch lake sheet asphalt, bitulithic or bituminous macadam, or asphalt block, together with the necessary grading, curbing, gutters, crosswalks, drainage, etc., according to the plans, specifications, and profiles on file in the office of Augustus Broemel, City Clk.

CALDWELL, OHIO.—Bids will be received by the Trustees of Noble Township until noon, March 28, for grading and paving with brick 4,580 lin. ft. of road in Noble Township. Estimated cost, $10,925. S. S. Barnhouse is Township Clk.

CANTON, OHIO.—Press reports are to the effect that more than seven miles of streets will be paved this year, at an estimated cost of $400,000.

CINCINNATI, OHIO.—Bids will be received by the Board of Commissioners of Hamilton County, until noon, April 7, for repairing the Lick Run Road, from Third Ave. to the corporation line of Cincinnati. Fred. Dreihs is Clk. Bd.

CLEVELAND, OHIO.—Bids will be received at the office of the Board of Commissioners of Cuyahoga County until 11 a. m. of April 1, for the improvement of a county road, in accordance with the form of contract and specifications to be furnished by Frank R. Lander, County Surv. John F. Goldenbogen is Clk. Comrs.

GALION, OHIO.—We are officially advised that bids will be received in about four or five weeks for constructing two miles of brick and one mile of treated macadam paving. A. O. Theobold is City Engr.

HAMILTON, OHIO.—Bids will be received by the Commissioners of Butler County until noon, March 24, for grading and macadamizing 2.1 miles of road in St. Clair Township. Specifications, plans and profiles are on file in the office of th[illegible] County Commissioners at Hamilton, and [illegible] the State Highway Department, Colum[illegible] Ohio. Estimated cost of constructio[illegible] 16,329.

HAVANA, OHIO.—Bids [illegible] be received until March 23 by the Bo[illegible] of Trustees of Norwich Township, Huron [illegible]unty, for the construction of a macadam [illegible]way 9.6 miles in length, in accordance [illegible] plans and specifications on file in t[illegible]ffice of the Township Clerk.

JACKSON, OHIO.—We a[illegible]fficially advised that street paving to c[illegible]8,000 is contemplated by the city. M[illegible] Monohan is City Engr., and Supt. of P[illegible].

LOGAN, OHIO.—Bids will [illegible] received by the City Council at the off[illegible] of the City Clerk, until March 16, for [illegible]nishing the necessary labor and materia[illegible] for the improvement of Main St., from [illegible]lver St. to the Hocking Valley tracks. [illegible]us Rochester is Village Clk.

✚LORAIN, OHIO.—We are [illegible]cially advised that the contract for con[illegible]ting sidewalks and croswalks through [illegible] the city, has been awarded to H. A. S[illegible]AILON, at $11,598. The other bidders were: [illegible] Graupner, $11,635; H. N. Oberlander, $1[illegible]2; M. L. Jackson, $11,943; Aaron Besh, [illegible],032; McHugh Bros., $12,524. Noted on [illegible]arch 2.

MASSILLON, OHIO.—We are [illegible]cially advised that bids will be asked a[illegible]t June 1 for constructing brick pavement [illegible]d sewers to cost $37,000. Harold How[illegible] is City Engr., and William Pietzcker is [illegible]t. Paving and Sewerage.

✚PORTSMOUTH, OHIO.—A contract for constructing cement sidewalks and curbs in the new Timmonds Addition has been awarded to FRANK BRAWLEY.

RAVENNA, OHIO.—Bids will be received at the office of the Commissioners of Portage County, Ohio, until noon, March 29, for grading and paving with brick 5.5[illegible] miles of road in Ravenna and Franklin Townships, under the provisions of the state highway law. Specifications, plans and profiles are on file in the office of the County Commissioners in Ravenna and at the State Highway Department, Columbus, Ohio. Copies of specifications may be obtained at the latter office. Estimated cost of construction, $74,971. James C. Wonders is State Highway Comr.

✚WARREN, OHIO.—We are officially advised that the contract for paving Summit St. has been awarded to W. S. PACE, and for constructing a sewer main in Riverside Road to WILHELM & SMITH. Noted on Feb. 16.

✚WOOSTER, OHIO.—A contract for paving 3,700 ft. of road has been awarded to HERRING & SON, Mansfield, Ohio, at $8,150. The other bidders were D. R. Houser, Wooster, $8,198; D. A. Phillips, Ashland, Ohio, $8,800; and L. Winderson, Orrville, Ohio, $8,900.

YOUNGSTOWN, OHIO.—Bids will be received by the Director of Public Service until noon, March 23, for paving portions of Braden, Duquesne and Superior Sts., and Logan Ave. W. H. McMillan is Clk.

Resolutions have been passed to grade Westlake Ave. and to pave Garland Ave. and Pearl St., between Wilson and Shehy Sts.

BLOOMFIELD, IND.—Bids will be received by the Commissioners of Green County until 2 p. m., April 4, for the construction of the Price and the Fisher free macadamized roads in Stoughton township. Cashwell H. Jennings is County Aud.

DANVILLE, IND.—Bids will be received until 10 a. m., April 4, by the commissioners of Hendricks County, for the construction of the David Foster gravel road, 12,106 ft. long, in Union Township. William H. Nichols, County Aud.

FOWLER, IND.—We are officially advised that no contract was awarded on March 6 for road construction in Benton County. New bids will be received until April 3. Noted on Feb. 9. Lemuel Shyman is County Audr.

HARTFORD CITY, IND.—Bids will be received by the Commissioners of Blackford County until 2 p. m., April 3, for the construction of the Burns macadam road, 15,070 ft. long, in Harrison Township. James Cronin, Jr., is County Auditor.

✚HUNTINGTON, IND.—The contract for constructing the John Shinkle Road, two miles long, has been awarded to MELVIN BOWEN, at $7,980.

✚JEFFERSONVILLE, IND.—We are officially advised that the contract for the construction of a gravel road in Owen, Bethlehem and Washington Townships was awarded on March 6 to W. WALTER TAGGART, at $5,568.

KENTLAND, IND.—Bids will be received by the Commissioners of Newton County until noon, April 4, for the construction of a macadam road on the line between Washington, Iroquois and Jefferson Townships. E. R. Bingham is County Audr.

✚LA FAYETTE, IND.—We are officially advised that the contract for constructing the Higley gravel road has been awarded to SNYDER & BARNET, Frankstort, Ind., at $6,995.

LOGANSPORT, IND.—Bids will be received by the Commissioners of Cass County until 10 a. m., April 4, for the construction of a free gravel road in Eel Township. John E. Wallace is County Audr.

LOGANSPORT, IND.—Bids will be received by Wilhelm Pickett, City Clk., until April 1 for constructing 50,000 sq. yds. of sheet asphalt pavement.

✚We are officially advised that the Board of Commissioners of Cass County have awarded contracts for gravel and stone roads, as follows: In Jefferson Township, the Allen Price Road, to F. H. NULL & CO., Windfall, Ind., at $6,580; in Jackson

Township, the John Miller Road, to HARRY BARNES & SON, Logansport, Ind., at $8,000. J. E. Wallace is County Audr.. Noted on March 2.

NOBLESVILLE, IND.—Bids will be received by George Griffin, Audr. of Hamilton County, until 2 p. m., March 28, for the construction of the following gravel roads: Road No. [illegible] in Jackson Township, length 13,100 ft., estimated cost, $9,224; road No. 145, in Adams Township, length 10,410 ft., estimated cost $5,282; road No. 146, in Jackson Township, length 11,770 ft., estimated cost $6,492; road No. 147, in Jackson Township, length 11,153 ft., estimated cost $5,584; road No. [illegible], Jackson Township, length 15,288 ft., estimated cost $9,965 and macadam road No. [illegible] in Jackson Township, length 3,789 ft., estimated cost $5,802.

PAOLI, IND.—Bids will be received by Alvin B. [illegible], Audr. of Orange County, until 2 p. m., April 4, for the construction of a macadam road in French Lick Township.

✚ROCKVILLE, IND.—We are officially advised that bids for constructing a road in Liberty Township were received on March 7 as follows: J. B. THOMAS & CO., Kingman, Ind., $4,375 (awarded contract); W. G. Carty, Montezuma, Ind., $4,400; J. P. Vaufossa[illegible], Rockville, Ind., $5,100; Chas. Ireland, Montezuma, Ind., $4,875; Ewbank & Ewbank, Kingman, Ind., $4,725.

SULLIVAN, IND.—The Commissioners of Sullivan County have ordered plans and specifications on which bids will soon be asked for the construction of four crushed stone and one brick road.

✚WABASH, IND.—We are officially advised that contracts for the construction of gravel roads were awarded on March 7 as follows: CONOVER & TOBER, $19,480; KILTY & HICK, $10,675; C. J. McGREEVEY & SON, $5,950; FRANK MURPHY, $8,180. Noted on March 2.

✚WILLIAMSPORT, IND.—We are officially advised that the contract for constructing a gravel road in Warren Township was awarded on March 6 to HAYNES & WAYMIRE, at $11,439. The other bidders were: D. H. Fatont, $12,495; Frank Simms, $12,557; W. W. Cram, $12,980; Fred Cunningham, $11,909; E. H. O'Leary, $13,229.

✚DETROIT, MICH.—Contracts for grading and paving various streets have been awarded as follows: Berlin St., from Mt. Elliott Ave. to East Grand Boulevard, 26 ft. wide, with cedar blocks, to T. E. CURRIE, 20 McGraw Bldg., at $15,644; Dearborn Ave., from P. M. and Wabash R. R. to Fort St., with cedar blocks, 30 ft. wide, less single track, and 40 ft. wide, less double track, to F. PORATH & SON, Penobscot Bldg., at $10,859; Dix Ave., from Livernois Ave. to Ferndale Ave., 46 ft. wide, less double track, with cedar blocks, to F. PORATH & SON, at $11,804; Missouri Ave., from Grand River Ave., to McGraw Ave., 26 ft. wide, with cedar blocks, to JULIUS PORATH, at $8,402; Willis Ave., from Russell St. to Chene St., 26 ft. wide, with cedar blocks, to F. PORATH & SON, at $20,824; Third Ave., from North Grand Boulevard to Calvert Ave., with cedar blocks, 28 ft. wide, to JULIUS PORATH, at $52,869; Canton Ave., from Kercheval to Mack Ave., 26 ft. wide, with sheet asphalt, to OTIS CEMENT CONSTRUCTION CO., 1010 Hammond Bldg., at $29,141. All paving to be on concrete foundation with Amherst curbing.

MERRILL, IOWA.—Bids will be received by Edward Stinton, Clk. of Johnson Township, until April 1, for grading several roads.

TOPEKA, KAN.—Bids will be received by C. B. Barge, City Clk., until March 20 for grading, curbing and paving portions of various streets.

GALVESTON, TEX.—Bids will be received by John M. Murch, Audr., Galveston County, until 11 a. m., March 27, for grading, regrading, paving with gravel, mudshell or crushed rock and building culverts, etc., on the road from La Marque to Texas City, a distance of about 4⅛ miles. Plans and specifications are on file in the office of the County Auditor, from whom copies can be had on application.

EVERETT, WASH.—Bids will be received by the Board of Commissioners of Snohomish County until March 20 for constructing a road between stations 51 and 121. P. T. Lee is County Audr.

OLYMPIA, WASH.—Bids will be received at the office of the Highway Board, Olympia, until 2 p. m., March 22, for clearing, grubbing, grading and draining State Aid Road No. 96, known as the road to South Bend, in Pacific County. The maps, plans, estimate and specifications are on file in the office of the County Engineer of Pacific County.

PORTLAND, ORE.—Mississippi Ave. will be paved this spring from Goldsmith to Prescott St., a distance of one mile.

WOODBURN, ORE.—The City Council has passed resolution No. 71, providing for the improvement of a portion of Hayes St. with a hard surface pavement, according to the plans filed in the office of the City Recorder, at an estimated cost of $13,271; also Resolution No. 72, providing for the improvement of a portion of Garfield St., at an estimated cost of $11,055.

WOODSTOCK, ORE.—A district has been formed at Woodstock by the Woodstock Push Club, called the East 39th St. District, in which the streets are to be paved at a cost of $36,962.

EMERYVILLE, CAL.—Bids will be received by F. H. Farr, Town Clk., until 8 p. m., March 20, for laying asphalt macadam pavement, drain and water pipes in the town of Emeryville.

LONG BEACH, CAL.—The West Beach Improvement Association has sold bonds for $[illegible],900, the proceeds of which will be used in the construction of a 30-ft. cement walk, extending from the Hotel Virginia to the San Gabriel jetties, a distance of one mile.

LOS ANGELES, CAL.—The Board of Public Works is considering the improvement of Alhambra Road by paving a 20-ft. strip with asphalt, and grading, graveling and oiling the balance of the roadway with cement curbs and gutters, at a cost of $26,500. Homer Hamlin is City Engr.

✚The Board of Public Works has awarded a contract to the BARBER ASPHALT PAVING CO., Central Bldg., Los Angeles, for improving Pico St., from Second Ave. to Alta St., at $5,621.

✚A contract has been awarded to the UNION OIL CO. for furnishing 20,000 bbls. of oil for road building, at $1.14 per bbl.

RIVERSIDE, CAL.—Bids will be received at the office of the County Auditor until April 6 for grading and draining a road in Okanogan County, specifications for which are on file in the office of the County Engineer.

GUELPH, ONT.—Bids will be received by T. J. Moore, City Clk., until noon, March 30, for the construction of approximately 26,000 sq. yds. of pavement, with about 5,000 lin. ft. of street railway track and approximately 13,000 lin. ft. of combined curb and gutter.

MANUFACTURING PLANTS.

(*✚ Denotes a contract awarded.*)

✚WELLS RIVER, VT.—Official advices are to the effect that the H. P. CUMMINGS CONSTRUCTION CO., of Ware, Mass., has been awarded the contract for building additions to the paper mill and concrete dam of the Adams Paper Co. at Wells River.

BOSTON, MASS.—The American Building Trust plans the erection of a set of 30 factories with warehouses, connecting by subways for freight, with large docks, the proposed cost being $20,000,000. The site for this plant is to be near City Point, South Boston, and is planned to cover 1,300,000 sq. ft. Construction is to be begun on five factories and five warehouses this year. These are to be of concrete steel, factories eight, and warehouses ten stories high, each to be 223 × 83 ft. One-third of the plant will be built this year. H. L. Gilman, 39 Haverhill St., is the Arch.

MALDEN, MASS.—Reports state that the Yale Knitting Co., recently organized to succeed the Holmes Knitting Co., of Malden, is to construct a mill building, three stories high, of concrete construction, with base dimensions of 100 × 50 ft.

✚NEW BRITAIN. CONN.—The B. H. HIBBARD CO., general contractors for the new factory of the National Spring Bed Co., has awarded the sub-contract for the steel work to the AMERICAN BRIDGE CO., 30 Church St., New York. Unkelbach & Perry, of New Britain, are the Archs. Noted last week.

✚WAUREGAN, CONN.—We are officially advised that the contract for remodelling and constructing additions to the mills of the Wauregan Co. has been awarded to the H. P. CUMMINGS CONSTRUCTION CO., of Ware, Mass.

BUFFALO, N. Y.—Jacob Oberkirker, Arch., 46 Orange St., is completing plans for a 4-story and basement wood working factory, 50 × 110 ft., of brick and structural iron, on Jefferson St., near Genesee St., for M. J. Bernhard, manufacturer of bar fixtures, 720 Jefferson St. The owner is receiving bids.

Colson & Hudson, Archs., Dun Bldg., have completed plans and are receiving bids for a 1-story brick addition, 55 × 224 ft., to be built to the plant of the Republic Metalware Co., Republic and Alabama Sts. and the Erie R. R.

George Cary, Arch., Delaware Ave. and Huron St., has plans in progress for a light manufacturing building, 80 × 132 ft., ten stories, of steel frame, brick and terra cotta, to be erected on Ellicott St., near Seneca St., by the Dexter P. Rumsey Estate, Ellicott Square Bldg.

✚BUFFALO, N. Y.—The EASTERN CONCRETE STEEL CO., D. S. Morgan Bldg., has received the contract for the erection of a 2-story machine shop, of brick and steel, at West and Fernwood Aves., for O. Bryant & Sons Co., 15 Bradley St.

The Niagara Radiator & Boiler Works is planning to build an extensive addition to its plant to cost $100,000.

CORTLAND, N. Y.—The Groton Bridge Co., of Corning, is preparing plans for a factory for Wickwire Bros., of Cortland, it is reported.

✚JAMESTOWN, N. Y.—PILLSBURY BROS. have been awarded the contract for the construction of a 2-story addition, 60 × 120 ft., to the furniture factory of the F. M. Curtis Co., on Cheney St.

✚TROY, N. Y.—CHARLES CROWLEY & CO. have received the contract from the Troy Waste Mfg. Co. for a 5-story and basement addition, 38 × 100 ft., to be made to its warehouse and factory at Jacob and River Sts.

WATERFORD, N. Y.—It is stated that the Shaugnessy Knitting Co. will erect a plant, 50 × 140 ft., three stories high, the estimated cost of which will be $50,000.

HASBROUCK HEIGHTS, N. J.—Gregg & Co., of Newburg, N. Y., it is reported, have purchased property here and contemplate establishing a factory for making sugar refining machinery. Plans for the structure have been prepared. The estimated cost is $500,000.

✚PERTH AMBOY, N. J.—We are officially advised that the general contract for constructing an addition to the factory of the United Cigar Manufacturers Co., of Perth Amboy, has been awarded to W. A. L'HOMMEDIEU & CO., 1 Madison Ave., New York.

DUQUESNE, PA.—The granting of a charter recently to the Independent Developing Co. marked the final step in a consolidation that means the expenditure of $500,000, the construction of miles of street railway and the development of the region between Duquesne and Glassport. The company is taking over the Duquesne & Dravosburg Street Railway and the Duquesne Annex Land Co. and will erect an immense brick plant on its property back of Duquesne. Two and one-fourth miles of street railway will be built at once, connecting Duquesne Annex and Dravosburg, according to reports.

HARRISBURG, PA.—Plans for a 3-story mill have been completed by the Wellknit Hosiery Co., of Harrisburg. The structure will be of fireproof construction, three stories high, and will cost about $20,000. Work will be started in the spring.

HONESDALE, PA.—The Honesdale Knitting Mill Co. is being promoted by H. Preumers, of Honesdale. The establishment of a knitting mill is contemplated. The capital stock of the company is $25,000.

OIL CITY, PA.—A 2-story ice cream and candy factory is contemplated here by Moore Bros. It will be of concrete block and 24 × 50 ft. and will have a capacity of 1,000 gals. in ten hours.

PHILADELPHIA, PA.—Plans have been filed with the Bureau of Building Inspection for a 4-story addition, to cost $25,000, to the macaroni factory of Cine & Tasca, at 1126 to 1132 South Ninth St.

The American Can Co. is having plans prepared for a 5-story concrete factory and warehouse, 80 × 340 ft., at Beach and Palmer Sts., to cost $150,000.

The Roxboro Hosiery Mills have purchased land in this city for $10,000, it is stated. S. S. Miller, of Reading, manufacturer of men's hosiery, will erect a new mill to be 36 × 120 ft., three stories and basement. The boiler-house will be separate from the main building, with a new engine and boiler of 100 HP. and a dynamo for lighting purposes.

SCRANTON, PA.—Announcement has been made that the Scranton Electric Co. proposes to spend $1,000,000 for making improvements to the plants in this city and vicinity. The making of electricity and steam is to be centralized in the suburban plant in Green Ridge and at the plant on the banks of the Lackawanna River.

BALTIMORE, MD.—Plans are being prepared and estimates will be received about April 1 for the construction of an ice plant here for the American Ice Co. The proposed structure will be erected on Franklin St. near Pulaski st. and will be 50 × 110 ft. The cost, exclusive of equipment, will be $40,000.

The Twombly Motor Co., of New York, is planning the erection of a plant here, it is stated. The company, which is constructing a $1,000,000 plant in Canada, at Niagara Falls, and another in Germany, is in the market for a 10-acre site on which to build an American factory. The new plant will be capitalized at $1,000,000. The company will manufacture automobiles for business and pleasure, aeroplane engines and motor boats. Irving Twombly is Vice-Pres. and Francis M. Babcock, Agent.

WOODBERRY (Baltimore post-office), MD.—The Consolidated Cotton Duck Co., it is reported, will erect a cotton duck mill here. Dr. David H. Carroll is Vice-Pres.

ROANOKE, VA.—Arrangements for the construction of a creamery are now being made. It will be 50 × 60 ft. Richard Bros., Smith Young and W. H. Brinker are among those interested.

GREENVILLE, S. C.—According to reports, the Gilreath Mfg. Co., manufacturers of underwear, will make various improvements to its plant, which will practically double the present capacity. J. D. Gilreath is Pres. and G. C. Sexton, of Fairfield, Ill., has been retained as Gen. Mgr. and Sales Agent.

BRUNSWICK, GA.—The Southeastern Naval Stores Co., of Toledo, Ohio, plans to build a wood distillery at Brunswick, and will erect concrete buildings costing $60,000 and install machinery costing $180,000, it is stated. James S. Brailey, Jr., is Pres., his present address being Hotel Oglethorpe, Brunswick.

CONYERS, GA.—A knitting mill is contemplated here by W. G. Flake and associates, the machinery of which will be electrically driven.

MIAMI, FLA.—H. H. Kirkpatrick, C. H. Sulzner, J. Austin Hall and others are interested in the erection of a brick plant with a daily capacity of 12,000 to 15,000 bricks. Estimated cost, $20,000.

BIRMINGHAM, ALA.—According to reports, it is now practically certain that the American Cement Tile Mfg. Co. will locate permanently in the Birmingham district near Corey, and will soon be in readiness to erect a large plant, where not less than 200 men will find employment. The plant to be constructed will cost approximately $100,000.

BIRMINGHAM, ALA.—Advices are to the effect that a site for a plant has been purchased by the Ledger Publishing Co. at First Ave. and 21st St. It is 50 × 100 ft. Plans will be prepared by William C. Welton, Arch., and it is expected that excavation will begin soon.

TROY, ALA.—The plans have been perfected and the lot secured on which will be built a ginnery, grist mill, cotton crusher and plant for the manufacture of mill feed. S. B. Reeves, J. H. Jones and Troy Reeves, all of Troy, are interested in the project.

MEMPHIS, TENN.—The Proctor & Gamble Co., soap manufacturers, will, it is stated, erect a 12-stand cottonseed oil mill here, costing from $275,000 to $350,000.

Swift & Co. will also establish oil mills here. A. D. Allen will be Local Manager.

AKRON, OHIO.—The Biggs Boiler Co. will soon award a contract for a $50,000 addition to its plant.

CINCINNATI, OHIO.—A building permit has been issued to the Domestic Science Banking Co. for the erection of a $60,000 brick and concrete plant at 747-755 West Fifth St.

BARBERTON, OHIO.—The Portage Rubber Co., a $1,000,000 corporation, plans to establish a plant on its property here, where the present reclaiming plant now stands. The following directors have been elected: James Christy, John W. Miller, John Kerch, Dayton A. Doyle, M. S. Long, James D. Raw, A. S. Mottinger, W. W. Wildman. The directors chose the following officers: James Christy, Pres.; John W. Miller, Vice-Pres.; Arthur S. Mottinger, Treas.; G. H. Doolittle, Secy.; W. W. Wildman, Gen. Mgr.

CLEVELAND, OHIO.—A permit for the erection of a $15,000 factory building at 1538-40 East 49th St., has been granted to William Dunbar. It will be of concrete construction and three stories high.

✚COLUMBUS, OHIO.—Brightman & Co., manufacturers, have awarded the contract for the erection of their factory building in South Columbus to the McCLINTIC-MARSHALL CO., Park Bldg., Pittsburg, Pa. The main building will be 132 × 400 ft. and will have a wing 60 × 100 ft. The office building contract has not yet been let. The factory buildings will be of steel construction and over 20,000 sq. ft. of glass will be used. Noted on Feb. 23.

Trott & Co., candy manufacturers, at Broad and Cypress Sts., will build an addition to their plant.

TORONTO, OHIO.—A. T. Freeman, of Steubenville, and associates, are said to be planning a brick manufacturing plant at Holbert's Run near Toronto.

UHRICHSVILLE, OHIO.—The Uhrichsville Clay Co. has been incorporated with a capital stock of $50,000 and will erect a plant west of Uhrichsville, on land now owned by Benner Minnich. The incorporators of the new concern are: W. A. Coldren, O. A. Parr, Benner Minnich, H. S. Clever and E. E. Benner. The company will manufacture a high grade of building brick, hollow building blocks and a hollow block to be used in the construction of the inside of walls to make them dry and sanitary. The daily capacity of the plant will be 30,000 brick. Construction of the new factory will begin as soon as weather permits.

GRIFFITH, IND.—Advices are to the effect that officials of the Interstate Iron & Steel Co., of East Chicago, one of the large independent plants of the West, are about to close negotiations at Griffith, for a tract of land on which they will build an 8 and 9-in. bar mill, employing 1,000 men.

BATTLE CREEK, MICH.—The plant of the Oats Co., of Battle Creek, which was partly destroyed by fire on March 6, entailing a loss of about $100,000, will be rebuilt immediately.

BAY CITY, MICH.—The Standard Oil Co. has, according to reports, been granted a 30-year franchise permitting the company to build a storage plant. About $200,000 will be expended for buildings of steel and concrete.

GALIEN, MICH.—C. E. Rodgers, Healy Bldg., Detroit, is preparing plans for a milk factory, one story high, 127 × 44 ft., for the Eldin Milk Product Co., of Galien. The building will be of reinforced-concrete construction. The owners will sublet contracts and purchase all materials.

GRAND RAPIDS, MICH.—Pierre Lindhout, Ashton Bldg., Grand Rapids, will receive estimates soon on the 4-story factory addition to be built to the furniture plant of the Imperial Furniture Co., care of Architects. The building will be 65 × 65 ft., and will cost $70,000.

GRAND RAPIDS, MICH.—William J. Spooner has completed plans for a brick factory building to be erected on Front St. for the Johnson Furniture Co. It will be four stories high and 50 × 125 ft.

L'ANSE, MICH.—The L'Anse Bay Lumber Co. has filed articles of incorporation, capitalized at $250,000. The company will erect a double-band sawmill at L'Anse with a capacity of 75,000 ft. per day.

✚PORT HURON, MICH.—Greull & Ott, of Port Huron, have awarded the general contract for the factory building, 50 × 68 ft., to CHARLES HODDER, of Port Huron.

CHICAGO, ILL.—The Havana American Co., a branch of the American Tobacco Co., of New York, will construct a manufacturing plant to cost $175,000 on West Twelfth St., between Robey and Lincoln Sts. The building will be 456 ft. in length × 112 ft. in depth, two stories high, of bright red paving brick with gray terra cotta sills and lintels. George C. Nimmons, 204 Dearborn St., formerly of Nimmons & Fellows, is the Arch. The building will provide accomodations for 1,500 employes and 60,000,000 cigars annually will be produced.

HILLSBORO, ILL.—A smelting plant is contemplated here by William Lanyon, Pierce Bldg., St. Louis, Mo. R. M. Roosevelt, Frank H. Brown and Harry S. Hargrave. The buildings for the proposed plant will cover in the neighborhood of 35 acres. From the very start there will be ten buildings, of which the largest will be 75 × 400 ft. There will be two "furnace buildings" where the roasting of the ore will be done, engine-house, electrician's house, machine shops, carpenter shop, blacksmith shop, nitric acid house, lead chamber building, office and a pottery building. The buildings will all be of wood or steel frame covered with heavy corrugated iron, while some of the structures will be built of brick. About 350,000 lbs. of castings will be ordered as soon as the plans for the buildings are finally decided upon and a large amount of other material will be used. Mr. Roosevelt will be Mgr.

DALLAS, TEX.—We are officially advised that the Universal Stenotype Co. expects to begin the erection within 60 to 90 days of a strictly modern manufacturing plant, using concrete construction throughout. The machinery will be motor attached. The building will be two stories, 50 × 350 ft., and will cost approximately between $60,000 and $75,000 and the machinery between $50,000 and $55,000. Noted on March 2.

HONDO, TEX.—A. G. Walker, of Hondo, and associates, have taken preliminary steps towards the organization of a company with $30,000 capital stock for the installation of an ice factory here.

HUTTO, TEX.—Steps have been taken to erect a cotton-seed oil mill and install an ice plant at Hutto. Among those interested are: R. E. L. Miller, Charles Hanstrom, W. H. Farley, A. B. Walling and John Busch.

KAUFMAN, TEX.—The Kaufman Ice Co. has been organized at this place with a capital stock of $20,000. The incorporators are: J. W. Singleton, P. G. Bacon, George W. Shaw and others.

MISSION, TEX.—The Mission Cotton Oil Co., which was recently organized with a capital stock of $60,000, will establish a cotton-seed oil mill, a water-works plant and distributing system and an electric light plant at this place.

ORANGE, TEX.—Elmer S. Farwell, of Orange, is promoting the establishment at this place of a large mill for the manufacture of lumber from yellow pine. Mr. Farwell is connected with the yellow pine paper mill that is already in operation here.

RUSK, TEX.—The Legislature of Texas has passed a bill providing for the installation of a cotton goods factory at Rusk to be operated by penitentiary convicts. An appropriation of $150,000 has been made for the proposed plant.

SAN ANTONIO, TEX.—Capt. Charles Schreiber, of Kerrville, is said to be interested in a proposition to establish a mill for knitting hosiery here. It is proposed to form a corporation with a capital stock of at least $60,000, and woolen hosiery will be the product.

CALVIN, OKLA.—The Choctaw Cotton Oil Co., of Shawnee, will expend about $90,000 to build a cotton oil mill at Calvin.

OKLAHOMA CITY, OKLA.—The Oklahoma Rubber Co., capitalized at $400,000, has purchased a site and will begin immediate construction of a plant for the manufacture of rubber goods. A factory building, which including equipment, will cost $100,000, will be erected. The site for the factory consists of an 8-acre tract, located in the McCornack addition to Oklahoma City, three blocks south of the "Katy" depot. It is close to the North Canadian River. At this time, a 1-story, concrete factory building, 100 × 200 ft. in size, and a 2-story office building, 25 × 50 ft., will be constructed. These buildings will cost $25,000. For equipment and machinery, $32,000 has been expended. The company was recently organized in Oklahoma City by J. A. Swinehart, of Akron, Ohio, and C. E. Zahn and H. E. Swan, of Oklahoma City. The company will manufacture and distribute all kinds of rubber goods, including automobile tires, rubber shoes and hose. The plant will be under the personal management of J. A. Swinehart, Pres. of the company. He is the inventor and patentee of two kinds of auto tires.

DENVER, COLO.—About $70,000 will be spent by the Wilson, Freedheim & Wylie Co., manufacturers and wholesalers of men's furnishing goods, in a factory and wholesale house on Lawrence St., near 18th St. The company has purchased two lots from Edward B. Wicks for $28,000 and at an additional expenditure of $40,000 will erect a 4-story brick structure, thoroughly modern and equipped for a factory and a wholesale house.

EPHRAIM, UTAH.—At the annual meeting of the Sanpete Knitting Works, Ephraim, it was decided to erect a mill building, work on which will be started as soon as the weather permits.

✚MESA, ARIZ.—ARNOLD BROS. have secured contract for building an extensive addition to the plant of the Mesa Dairy & Ice Co. The building will be built of brick and will be about 50 × 60 ft. and 75 ft. in height.

CORVALLIS, ORE.—About $30,000 will be expended by the Corvallis Lumber Co. in the next few months on improvements. The mill's capacity will be increased by 1,500 ft. per day. A big dry kiln is under construction and a railroad spur is being built to handle the large number of shipments that are being made. The mill is situated at the forks of the Willamette and Mary's River and has an almost inexhaustible supply of timber within reach.

✚SALEM, ORE.—A permit nas been issued to the Salem Brewery Association for the erection of a 5-story reinforced-concrete building at the corner of Commercial and Trade Sts. ERB & VAN PATTON are the contractors. Each piece of machinery will have an individual motor, and electricity will be the only form of power used in the whole plant.

CORONA, CAL.—The Temescal Clay Products Co., of Los Angeles, recently incorporated for $1,000,000 for the purpose of manufacturing sewer pipe, has purchased 140 acres of valuable clay beds in the Temescal Canyon, south of Corona. The consideration is $20,000. The company will erect a modern clay-working plant, the main building to be 180 × 300 ft. The company will also manufacture fire brick, hollow tile, terra cotta and porcelain.

LOS ANGELES, CAL.—Walker & Vawter, Archs., Wright & Callender Bldg., have prepared plans for a factory building, 50 × 125 ft., to be erected on 32d St. for the James Schultz Lumber Co. Several carloads of wood-working machinery and electric motors will be required.

SAN JOSE, CAL.—The establishment of a factory to manufacture window glass is contemplated here by Charles J. Hurrle. The Chamber of Commerce is interested. Estimated cost, $35,000.

WELLAND, ONT.—The Electro Metals Co. will double the size of its plant in the spring.

United Motors, a concern manufacturing automobiles, will erect a new factory building this season.

Te Canada Car & Foundry Co. is reported to have decided to erect a $2,000,000 addition to its plant here.

WINNIPEG, MAN.—The Canadian Pacific Ry. Co. proposes to greatly extend its shops here and work will commence early in April. J. E. Schwitzer, of Winnipeg, is Asst. Ch. Engr.

NEW WESTMINSTER, B. C.—A charter has just been granted by the Ottawa Government incorporating the British Columbia Steel Corporation, with a capital of $10,000,000. The plant will be erected on the Fraser River, near New Westminster. Its capacity from seven furnaces will be 850 tons a day. About 3,000 men will be employed. A. P. Gibbs, King Edward Hotel, Toronto, Ont., is interested.

✚VANCOUVER, B. C.—Official advices are to the effect that work on the proposed wholesale house which H. T. Duncan will build in Vancouver will be started at once, the contract having recently been awarded to H. L. STEVENS & CO., of Vancouver and Kansas City, Mo.

IRAPUATO, MEX.—The National Railways of Mexico will soon begin the erection of shops at Orapuato, it is stated. James M. Reid, of Mexico City, is Ch. Engr.

TAMPICO, MEX.—George M. Howat will erect a plant for the manufacture of galvanized sheet iron, sheet tin and other iron products at this place. He has obtained a concession from the Government for the proposed enterprise. It is stated that about $500,000 gold will be invested in the plant.

MISCELLANEOUS CONTRACTS.

(**Denotes that this work is advertised in Engineering News.*)

U. S. RECLAMATION SERVICE.—All news concerning canal and irrigation projects, etc., will be found under Water Supply — Irrigation.

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*ROCK EXCAVATION. — Portland, Me. — Bids will be received until noon, April 11, by Lt.-Col. W. E. Craighill, Corps Engrs., U. S. A., for rock excavation in the Kennebec River at South Gardiner, Me.

BATH HOUSES.—Boston, Mass.—Bids will be received until March 17 by the Board of Bath Trustees for additions and improvements to several bath houses in South Boston. Richard M. Walsh is Chn.

FERRYBOAT. — Boston, Mass. — Only one bid, that of the Bath Iron Works, Bath, Me., at $149,500, has been received by the city for the construction of a ferryboat. The bid was rejected as excessive. L. K. Rourke is Comr. Pub. Wks.

✚DREDGING.—Providence, R. I.—Bids were received on Feb. 25, by the Board of Contract and Supply, for removing certain deposits in the Woonasquatucket, Moshassuck and Providence Rivers. The contract has been awarded to the PACKARD DREDGING CO., of Providence, at $92,425.

✚CONCRETE SEAWALL. — Bridgeport, Conn.—The contract for the construction or 325 ft. of concrete seawall on the Pequonnock River for the Bridgeport Crucible Co. has been awarded to TOOLE & SUNDERLIN, of Bridgeport, at about $100,000.

STONE CRUSHER, ETC.—Putnam, Conn.—The town has voted to purchase a stone crusher and a steam road roller for use on the town roads.

DOCK IMPROVEMENTS.—Buffalo, N. Y.—Contracts, it is reported, will soon be awarded by the Lehigh Valley R. R. Co. for improvements to its coal and iron ore docks here. The ore docks will be of concrete and the coal docks of trestle construction with coal pockets for handling anthracite coal. Estimated cost, $500,000. E. B. Ashby is Ch. Engr., New York.

DREDGING.—Buffalo, N. Y.—Contracts will be awarded by the Board of Public Works for the completion of the dredging work in the Buffalo River. Francis G. Ward is Comr.

GRAVEL ROAD. — New York, N. Y. — Bids will be received until 11 a. m., March 27, by Lawrence Gresser, Pres. Boro. Queens, for furnishing and delivering Hudson River road gravel, asphalt blocks, tar oil, iron slag paving blocks, road paving blocks, street signs and posts, and vitrified bricks.

COMFORT STATION.—New York, N. Y.—Bids will be received until 3 p. m., March 23, by the Park Board, Dept. of Parks, Fifth Ave and 64th St., Boro. Manhattan, for all labor and materials required for the erection and completion of a comfort station in Central Park, near the Swiss Cottage.

ROAD GRAVEL.—New York, N. Y.—Bids will be received by the Park Board, Dept. of Parks, until 3 p. m., March 23, for furnishing and delivering 5,000 cu. yds. of Hudson River road gravel for parks, Boro. The Bronx.

PLAYGROUND.—New York, N. Y.—Bids will be received by the Park Board, Dept. of Parks, until 3 p. m., March 23, for the construction of Red Hook playground, at Richards, King, Dwight and Pioneer Sts., Boro. Brooklyn.

FIRE HOSE, ETC.—New York, N. Y.—Bids will be received by R. Waldo, Fire Comr., until 10.30 a. m., March 22, for furnishing and delivering 5,000 ft. of 1½-in. rubber fire hose for the boroughs of Manhattan, The Bronx and Richmond, and 5,000 ft. of 1½-in. rubber fire hose for the boroughs of Brooklyn and Queens; also for furnishing and delivering general supplies.

FIRE LINES.—New York, N. Y.—Bids will be receiced until noon, March 23, by Calvin Tomkins, Comr. of Docks, for Contract No. 1245, for furnishing all the labor and materials required for installing fire lines with appurtenances, and for constructing stairway at Pier (New) 1, North River, Boro. Manhattan.

PLAYGROUND. — New York, N. Y. — Bids were opened as follows, on March 2, by the Park Board, Dept. of Parks, for the construction of the Red Hook playground at Richards, King, Dwight and Pioneer Sts., Boro. Brooklyn: J. W. Fiske Iron Works, 56 Park Pl., New York, $16,225; Frank J. Gallagher, 490 Park Pl., New York, $21,474; Kelly & Kelley, Inc., 45 East 42d St., New York, $19,984; John MacArthur, 22 Armond Pl., Brooklyn, $24,076; William Werner, 657 Vanderbilt St., Brooklyn, $17,295; Norton & Gorman Contracting Co., 339 Douglass St., Brooklyn, $19,969.

BOARDWALK.—Ocean City, N. J.—The City Council has ordered specifications for the extension of the boardwalk from 17th Ave. to 23d Ave.

*GRAND STAND. — Allentown, Pa. — Bids will be received by the Executive Committee of the Lehigh County Agricultural Society at the office of the society, Stiles Bldg., Allentown, until noon, March 23, for the construction of a new grand stand at the Allentown Fair Grounds. For details see advertisement in this issue.

✚STRUCTURAL STEEL. — Philadelphia, Pa.—The city has awarded the contract to JAMES G. DEMPSEY, Inspecting Engr., 138 Sumac St., Philadelphia, for the mill and shop inspection of the structural steel required in the construction of the superstructure of the Vine St. pier, the steel contract for which was awarded to the Pennsylvania Steel Co., of Steelton, Pa.

✚STEEL WORK.—Annapolis, Md.—The Navy Athletic Association has awarded the contract to W. L. LAUER, of Lauer & Harper Co., Westport, Md., for steel structural work on the athletic stand at the Naval Academy, Annapolis. Estimated cost, about $22,000. The contract for foundation work has been awarded.

✚DOCK.—Annapolis, Md.—The Navy Department has awarded the contract to SANFORD & BROOKS, Commerce and Water Sts., Baltimore, Md., for constructing the new dock at the Naval Academy here. The sum of $75,000 has been appropriated for the work.

SUBMARINES. — Washington, D. C. — Bids have been opened for four submarines provded for in the Naval Appropriation Act of the former Congress. There were three bidders: the Electric Boat Co., of Quincy, Mass.; the Lake Torpedo Boat Co., of Bridgeport, Conn.; and the American Laurente Co., of Philadelphia. Bids ranged from $475,000 to $550,000.

WIRE AND CABLE.—Washington, D. C.—Bids will be received until March 17 by Capt. A. S. Cowan, Signal Corps, U. S. A., Washington, for furnishing wire and cable under Proposal No. 506.

WIRELESS STATION.—Washington, D. C.—The Navy Department, it is reported, proposes to erect a high-power wireless telegraph station near Washington. The tentative plans call for three or four steel towers 450 ft. high, self-supporting, each capable of withstanding a horizontal pull at the top of 1,000 lbs. It is proposed to make such arrangements as will permit the stepping of a mast 150 ft. high on one of the towers for temporary use. At least two buildings of concrete construction, separate from the towers, will be required.

FIRE HALL.—Georgetown, S. C.—Bids will be received until March 20 by the Fire Commissioner for erecting a 2-story brick fire hall. Arthur W. Hamly is Arch., Columbia, S. C.

DOCK EXTENSIONS.—Miami, Fla.—The Florida East Coast Ry. Co., it is reported, will extend its terminal docks 2,000 ft. W. M. McDonald, Miami, is Supt.

ROCK.—New Orleans, La.—Bids will be received until 11 a. m., April 6, by Maj. H. Burgess, Corps Engrs., U. S. A., New Orleans, for furnishing about 65,000 tons or rock for bank revetment.

LEVEE WORK.—New Orleans, La.—The Board of State Engineers, New Orleans Court Bldg., New Orleans, will receive bids until March 16 for the construction of the Villa Vista Levee in East Carroll and Madison parishes, aggregating 250,000 cu. yds.

✚VITRIFIED BLOCKS.—Louisville, Ky.—The city has awarded the contract for furnishing about 200,000 vitrified blocks, delivered f. o. b. at the city wharf, to the PEEBLES PAVING BRICK CO., of Portsmouth, Ohio, at $15 per M. The KENTUCKY VITRIFIED BRICK CO., of Louisville, secured the contract for furnishing an unnamed number of vitrified bricks at $12 per M. Bids were opened on March 7.

*LOCK AND DAM.—Cincinnati, Ohio.—The Sheridan-Kirk Contract Co. awarded contract for constructing lock and dam No. 29, Ohio River, near Ashland, Ky., has sublet the iron and steel work to the PENN BRIDGE CO., of Beaver Falls, Pa. The contract includes 512 tons of structural steel, 139 tons of iron castings, 92 tons of steel castings, 36 tons of bolts and 28 tons of forgings. Noted on March 9.

ICE PIERS.—Cincinnati, Ohio.—Bids were received by Maj. H. Jervey, Corps Engrs., U. S. A., on March 7, as follows, for the reconstruction of the Middleport ice piers in the Ohio River, at Middleport: Fassig & Campbell, Wheeling, W. Va., $36,786; Curtis & Shumway, Portsmouth, Ohio, $32,437; Pfoff & Smith, Charleston, W. Va., $34,588; Thomas J. McKim, Cincinnati, $39,775; Frank A. Bone, $33,164; Advance Stone & Construction Co., Pittsburg, Pa., $53,437.

✚BOILERS.—Toledo, Ohio.—A contract has been awarded to the MARINE BOILER WORKS, Front St., Toledo, for eight Scotch marine boilers, 13 ft. in diameter, at about $50,000. The boilers are for the boats being built by the Great Lakes Engineering Co.

DRAINAGE, ETC. — Brazil, Ind. — The County Commissioners have appointed W. S. Rawlay as Drainage Commissioner to prepare plans, let the contract and supervise the work of putting in a system of drainage and straightening Ell River through Clay and Owen Counties.

GATEWAY, LODGE HOUSE.—Columbus, Ind.—Bids will be received by the Board of Directors of Garland Brook Cemetery at the office of William Brockman, Treas., until 1 p. m., April 4, for a stone gateway and lodge-house for Garland Brook Cemetery, according to plans and specifications which can be seen at the office of the Treasurer at Columbus.

TELEPHONE SYSTEM.—Geneva, Ind.—The Star Telephone Co. will soon ask for bids for furnishing all material for the construction and equipment, complete, of a telephone exchange and system in this city and county. J. Stuben is Pres.

DITCH.—Muncie, Ind.—Plans are being prepared for the construction of a large ditch and lateral ditches in Center Township, Delaware County, petition[illegible] for by Frank R. Miller and others. B[illegible] will be asked as soon as specifications a[illegible] completed.

*DREDGING. — Detroit, [illegible] — Bids will be received until 3 p. m., A[illegible] 10, by Col. C. McD. Townsend, Corps Eng[illegible] U. S. A., Detroit, for dredging at Balla[illegible] Reef, Detroit River; and at Rogers City, [illegible]

*MASONRY. — Granite Cit[illegible] Ill. — Conners Bros. Co., Lowell, Mass., h[illegible] small post-office to build at Granite C[illegible] Ill., and desire to sublet the masonry. [illegible] furnish all tools and material, or will [illegible] price any way. About 200,000 brick [illegible]. Building stone faced.

MONUMENT. — Paris, Ill. [illegible] The Edgar County Board of Superviso[illegible] will receive bids for the erection of a sold[illegible] monument in the court-house yard as [illegible] as design is selected. Estimated cost, $[illegible]00.

DITCHES.—Algona, Iowa.—[illegible] E. Norton, County Audr., will receive bids [illegible] 2 p. m., March 21, for the construct[illegible] of county ditches Nos. 55 and 58, compri[illegible] 17,312 ft. of 6 to 20-in. tile and 7,550 ft. [illegible] to 18-in. tile, respectively.

HARBOR IMPROVEMENT. [illegible]avenport, Iowa. — The city is consideri[illegible] improving the harbor, by building a sea w[illegible] and filling in to reclaim land. Estimated [illegible], $100,000. A. M. Compton is City E[illegible]

DITCH. — Emmetsburg, Iowa. [illegible]lans for the construction of a ditch for P[illegible] Alto and Pocahontas Counties have been [illegible]pared by F. A. Malcom, of Rolfe. Esti[illegible]ed cost, $300,000. J. R. Martin is Co[illegible] Audr., Palo Alto County, Emmetsburg.

DITCH.—Fort Dodge, Iowa.—Bi[illegible] will be received until March 17 by the J[illegible]t Board of Supervisors of Webster and Cal[illegible]n Counties, at the office of J. L. Hanrahan, County Audr., Fort Dodge, for furnishing material and constructing a ditch and drain [illegible] Drainage District No. 70, Webster County, and in Drainage District No. 95, Calhoun County. Estimated cost, $27,406. G. P. Smith is Engr., Fort Dodge.

DITCH.—Sibley, Iowa.—V. A. Burley, County Audr., will receive bids for the construction of the open ditch in Drainage District No. 11, consisting of 128,640 cu. yds. of excavation. Length, about 31,000 ft.; width, 6 ft. at bottom.

✚DITCH.—Albert Lea, Minn.—C. E. Brainerd, County Audr., received bids on Feb. 23 for the construction of county ditch No. 23, approximating 156,528 yds. of excavation; estimated cost, $15,010. The contract has been awarded to GEORGE CONN, of Royal Center, Ind.

DREDGE WORK.—Redwood Falls, Minn.—L. P. Larson, County Audr., will receive bids for completing the dredge work to county ditch No. 6, of Redwood County, until 1 p. m., March 22.

✚DITCH.—Warren, Minn.—A. G. Lundgren, County Audr., received bids on Feb. 21, for the construction of judicial ditch No. 12, approximately 526,427 yds. of excavation, estimated to cost $52,642. The contract has been awarded to the NORTHWESTERN DRAINAGE CO., of Thief River Falls, Minn.

✚DITCH. — Warren, Minn. — The contract for constructing Judicial Ditch No. 12, about 526,427 cu. yds., has been awarded to the J. B. ARPIN DREDGING CO., of Grand Rapids, Wis., at $67,646. Bids were opened on Feb. 21.

CEMENT.—Leavenworth, Kan.—Bids were received as follows, on March 3, by the Superintendent of Prisons, Dept. of Justice, Washington, D. C., for furnishing 8,000 bbls. of Portland cement at the U. S. penitentiary, Leavenworth: Union Sand & Material Co., Kansas City, Mo., $1.15 per bbl.; sacks, 10 cts. Western States Portland Cement Co., Kansas City, $9,440, and 10 cts. The Bonner Brand Portland Cement Co., Kansas City, $9,840, and 10 cts. The Dewey Portland Cement Co., Kansas City, $8,800, and 10 cts. The Iola Portland Cement Co., Kansas City, $9,040, and 10 cts. The United Kansas Portland Cement Co., Kansas City, $9,040, and 10 cts. Ashgrove Lime & Cement Co., Kansas City, $10,000, and 10 cts. The Atlas Portland Cement Co., Chicago, Ill., $10,240, and 10 cts. P. J. McDonald, Leavenworth, $13,920. Universal Portland Cement Co., Pittsburg, Pa., $1.78 per bbl., including sacks valued at 10 cts. each.

✚LEVEES, FLOOD-GATES. — Brenham, Tex.—The contract has been awarded by the Commissioners of Washington County Improvement District No. 1 to JOHN LEONARD, Memphis, Tenn., for the construction of about ten miles of levees and the installation of flood-gates in the Brazos Bottom in Washington County, between Old Washington and Chappell Hill, at $41,325. Noted on Feb. 2 and Feb. 9.

✚WHARF. —Houston, Tex. — The contract for building a wharf below gas house bend for the Electric Lighting and Power Co. has been awarded to A. N. FITZGERALD.

✚PIPE LINE.—San Antonio, Tex.—A contract has been awarded to J. A. ANDREWS & SON, San Antonio, Tex., to build a 6-in. pipe line from the Vinton oil field to Toomey Station on the main line of the Southern Pacific Ry., a distance of five miles from the Vinton field.

✚OIL STORAGE.—Bremerton, Wash.—The Navy Department has awarded the contract to C. F. GRAFF, Central Bldg., Seattle, Wash., for the construction of an oil storage warehouse at the navy yard here, at $[illegible],000.

STONE.—Seattle, Wash.—Bids will be received until noon, April 7, by Maj. [illegible] W. Kutz, Corps Engrs., U. S. A., Seattle, for furnishing stone, etc.

DOCKS. — Tarorna, Wash. — The sum of $405,000 is available for the construction of a system of city docks. One dock of the proposed series has been constructed. W. C. Raleigh is City Engr.

FIRE STATION. — Vancouver Barracks (Vancouver post-office), Wash.—Bids will be received at the office of the Constructing Quartermaster, U. S. A., Vancouver Barracks, until 11 a. m., March 30, for the construction of a fire station, basement and chimney of reinforced concrete frame superstructure, slate roof, including plumbing, hot-water heating, electric wiring and fixtures, at Vancouver Barracks.

METAL WORK.—Berkeley, Cal.—The following bids were opened by the Regents of the University of California for roofing and sheet-metal work for the Agricultural Hall on the Berkeley campus: Rulofson Metal Window Works, $15,692; San Francisco Cornice Works, $15,448; Coulin & Roberts, $15,287; Farder Cornice Works, $14,474; Guilfoy Cornice Works, $13,765.

TUNNEL.—Los Angeles, Cal.—The Board of Public Works has recommended to the City Council the report of Homer Hamlin, City Engr., for the construction of a 2-bore tunnel at [illegible]st St. Estimated cost, $844,648. The sum of $314,932 would be the estimated share of c[illegible] of the railway company.

FIRE APPARATUS.—Los Angeles, Cal.—Lorin A. Handley, City Clk., will receive bids until Apr[illegible] for one motor-propelled aerial hook and ladder truck.

DREDGING, LEVEES.—Oakland, Cal.—The California Reclamation Co., Merchants' Exchange Bldg., has submitted the lowest bid, at 23 cts. per cu. yd., for levees and dredging in the Key Ponte Basin. Frank R. Thompson is City Clk.

*STREET ROLLER. — Sacramento, Cal. — Bids for a street roller of modern and approved type, weighing not less than 12 tons and propelled either by steam or gas, will be received at the office of M. J. Desmond, City Clk., until 8 p. m., April 1.

DREDGE.—San Francisco, Cal.—It is reported that bids will be asked by the Government for the construction of a large dredge for use in San Francisco Bay.

FILLING.—Wilmington, Cal.—The Standard American Dredging Co., San Francisco, has submitted a proposition to the city to fill the property to the high grade lines, recently established by the city of Los Angeles, at 8 cts. per cu. yd. About 5,000,000 cu. yds. of material will be necessary, requiring 9,000 ft. of discharge pipe and the installation of a relay pumping plant.

WHARF.—Chateauguay, Que.—Bids will be received until April 4 by R. C. Desrochers, Secy. Pub. Wks. Dept., Ottawa, Ont., for the construction of a wharf at Chateauguay. Plans and information may be obtained at Ottawa, or from J. L. Michaud, Dist. Engr., Merchants Bank Bldg., Montreal, Que.

✚CEMENT, LEAD PIPE, ETC.—Hamilton, Ont., Can.—The city has awarded the following contracts: Portland cement to the CANADA CEMENT CO., at $1.48 per bbl. of 350 lbs.; pig lead to TALMAN BRASS & METAL CO., at $3.45 per cwt.; lead pipe, 60 tons ½-in., five tons ¾-in., 7½ tons 1-in., all at $4.10 per cwt.; stop valves, 10 to 12-in., $36 a piece; 115 6-in. at $9 each; 72-in. reinforced-concrete pipe to REINFORCED CONCRETE PIPE CO., Jackson, Mich., at $7.22 per lin. ft.; ordinary castings, to HAMILTON FOUNDRY CO., at $1.95 per cwt.; extension boxes to FORWELL FOUNDRY CO., at $1.28 each for 1,200 small size and $1.38 each for 200 of large size; to GARTSHORE, THOMSON PIPE & FOUNDRY CO., for c.-i. pipe, at $32 per ton; special castings, at $2.75 per cwt.; c.-i. manhole covers to GARTSHORE THOMSON PIPE & FOUNDRY CO., at $2 per cwt.

ENGINE HOUSE.—London, Ont.—Bids will be received until noon, March 25, by A. L. Hertzberg, Division Engr. Canadian Pacific Ry. Co., Union Station, Toronto, Ont., for the construction of a 22-stall engine house, with machine and boiler shops, here. Plans and specifications can be seen in the office of the Division Engineer, Toronto, and also in the office of the Resident Engineer, London.

SUBWAYS.—Toronto, Ont.—The City Council, on Feb. 20, agreed to abandon the proposed subway at Sunnyside, and substitute subways in various other sections of the city. C. H. Rust is City Engr.

TELEPHONE SYSTEM.—Underwood, Ont. —Bids will be received until March 18 by D. McNaughton, Pres. Bruce Municipal Telephone System, Underwood, for constructing a telephone system in the Townships of Bruce, Saugeen, Greenock, Kincardine, and Elderslie, Bruce County. George J. Beattie is Engr., 72 Victoria St., Toronto.

✚CAISSONS.—Hawaii.—The UNION IRON WORKS CO., of San Francisco, has been awarded the contract for furnishing the caisson for the dry-docks which the Government is constructing at Pearl Harbor, Hawaii, at $133,890. The contract calls for the installation as well as the building of the gates. Noted on Feb. 23.

EXAMINATIONS.

CADET ENGINEER.—Washington, D. C.—The U. S. Civil Service Commission invites attention to the fact that as the result of the examination for Cadet Engineer in the Lighthouse Service scheduled to be held on April 12, it is expected to fill twelve vacancies at salaries ranging from $660 to $1,080 a year, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer or promotion. The list of places at which this examination will be held, and information as to the scope and character of the examination are contained in the Manual of Examinations which, together with application and examination form 1312, may be obtained from the U. S. Civil Service Commission, Washington, D. C.

MAGNETIC OBSERVER. Washington, D. C.—The U. S. Civil Service Commission announces an examination on April 15, to secure eligibles from which to make certification to fill at least three vacancies in the position of Magnetic Observer in the Coast and Geodetic Survey, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer, or promotion. The initial salaries will range from $75 to $90 a month, according to the character of the work and the qualifications of the applicant; and in exceptional cases where the person employed has had repeated experience in magnetic work, the initial salary may reach $125 a month. Appointments to permanent positions are also made from the examination for Laboratory Assistant in the Bureau of Standards. Applicants must have reached their 20th, but not their 45th birthday. Examination form 1312.

STATISTICAN IN FOREST PRODUCTS.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on April 19, to secure eligibles from which to make certification to fill a vacancy in the position of Statistician In Forest Products, at $1,500 a year, in the Forest Service at Chicago, Ill., and vacancies requiring similar qualifications as they may occur at different places in the Forest Service, unless it shall be decided in the interest of the service to fill the vacancy by reinstatement, transfer or promotion. The examination will consist of the subjects mentioned below, weighted as indicated: Statistical methods, 15 points; manufacture and use of forest products, including waste and substitution of other materials, 20 points; markets and distribution of forest products, 25 points; training and experience, 40 points. Applicants must have reached their 20th, but not their 42d birthday. Examination form 1312.

LABORATORY AID.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on April 19, to secure eligibles from which to make certification to fill vacancies as they may occur in the position of Laboratory Aid in crop technology, Bureau of Plant Industry, Department of Agriculture, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer or promotion. The usual entrance salary for this position is $600 a year. The examination will consist of the subjects mentioned below, weighted as indicated: Spelling, 10 points; arithmetic, 15 points; penmanship, 10 points; report writing, 15 points; copying and correcting manuscript, 10 points; outline drawing, 10 points; physics, 30 points. Applicants must have reached their 17th, but not their 25th birthday. Examination form 304.

AID IN CHEMISTRY.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on April 19-20, to secure eligibles from which to make certification to fill a vacancy in the position of Aid, qualified in chemistry, at $780 a year, in the Pittsburg Laboratory, Bureau of Standards, Department of Commerce and Labor, and vacancies requiring similar qualifications as they may occur, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer or promotion. The examination will consist of the subjects mentioned below, weighted as indicated: Elementary algebra, geometry and trigonometry, 20 points; general physics, 20 points; elementary chemistry, 25 points; training and experience, 35 points. Applicants must have reached their 18th birthday. Examination form 1312.

JUNIOR CHEMIST.—Washington, D. C.—The U. S. Civil Service Commission announces an examination on April 19-20 to secure eligibles from which to make certification to fill vacancies as they may occur in the position of Junior Chemist (fuels), in the Bureau of Mines, Pittsburg, Pa., at salaries up to $1,380 a year, unless it shall be decided in the interest of the service to fill such vacancies by reinstatement, transfer or promotion. The examination will consist of the subjects mentioned below, weighted as indicated: Mineralogy, 5 points; translation from French or German technical works, 10 points; general chemistry and physics, including calculations, 20 points; essay on a subject relating to fuels, 15 points; chemistry of fuels, 25 points; training and experience, 25 points. Applicants must have reached their 20th, but not their 40th, birthday. Examination form 1312.

CONTRACT PRICES.

LOCK AND DAM NO. 29.—Cincinnati, Ohio.—Bids were received on Feb. 20 by Major H. Jervey, Corps Engrs., U. S. A., for constructing Lock and Dam No. 29 on the Ohio River, near Ashland, Ky., from, (A) Dravo Contracting Co., Pittsburg, Pa.; (B) Bates & Rogers Construction Co., Chicago, Ill.; (C) Sheridan-Kirk Contract Co., Cincinnati, Ohio. The item bids were as follows:

LOCK AND DAM, CINCINNATI, OHIO.

	A	B	C
4,200 lin ft. 16-ft. cofferdam	$30.00	$26.90	$20.00
1,600 lin. ft. 10-ft. cofferdam	15.00	16.40	15.00
93,681 cu. yds. common excavation	1.00	.70	.60
4,155 cu. yds. rock excavation	4.50	3.75	5.00
19,935 cu. yds. fill	.20	.45	60
2,500 cu. yds. riprap	4.00	3.75	5.00
69,317 lin. ft. B. M. oak timber	110.00	90.00	100.00
130 cu. yds. reinforced concrete	15.00	13.45	15.00
36,868 cu. yds. concrete	7.00	7.10	8.00
1,200 cu. yds. concrete paving	7.00	7.50	10.00
1,024,884 lbs. structural steel	.07	.0725	.065
21,353 lbs. reinforcing rods	.07	.045	.055
56,582 lbs. forgings	.07	.139	.07
73,808 lbs. bolts, etc.	.07	.078	.055
277,887 lbs. iron castings	.07	.122	.05
183,506 lbs. steel castings	.09	.145	.10
1,170 lbs. bronze	.80	.75	1.00
370 lin. ft. 5-in. pipe	3.00	1.85	2.00
2,400 lin. ft. 4-in. pipe	2.00	1.35	1.50
570 lin. ft. 3-in. pipe	1.50	1.35	1.00
750 lin. ft. 2½-in. pipe	1.00	.75	.80
800 lin. ft. 2-in pipe	.75	.65	.60
850 lin. ft. tile drain	.50	.65	.80
4,900 lin. ft. drilling bolt holes	.50	.75	.75
Totals	$682,673	$677,752	$644,842

INDUSTRIAL NOTES.

THE STERLING MACHINE CO. is the name of the consolidated firms of the Sterling Lubricator Co., Rochester, N. Y., and the Uncas Specialty Co., Norwich, Conn. The new offices and workshops will be located at Norwich, Conn. The company makes a specialty of automatic force feed lubricators.

THE CONTINUOUS FROG & CROSSING CO., 1408 Syndicate Trust Building, St. Louis, Mo., is the new name of the former Continuous Rail & Safety Switch Co. The company manufactures frog devices which give a continuous rail at turnouts and crossings, this continuous rail being for whichever track the switch is set. Pres. W. J. Holbrook; Vice.-Pres. and Gen. Mgr., Harry A. Rodgers; Secy., H. F. Roach.

THE WISCONSIN ENGINE CO., Corliss, Wis., heretofore controlled by Pittsburg capitalists, has, on account of the location of the plant, thought it advisable to bring Milwaukee business men in the company and two of the new directors will be from that city. The company, which has heretofore made a specialty of Corliss engines, will now enter extensively into new lines of manufacture; the chief of these will be the Adams gas engine, which will be made in sizes from 200 to 300 HP. This engine is named after the new president of the company, E. T. Adams, who was a pioneer in heavy gas-engine building, having designed a number of those now being used by the Steel Corporation at Gary, Ind.

WOOD PAVING BLOCKS FOR ITALY.—Vice Consul James B. Young, of Milan, Italy, says: "There is an opportunity for American wood paving blocks in Italian cities, particularly Milan. Some streets here are already partially paved with such material from Australia, and in time the principal streets will probably be thus paved. Atmospheric conditions in Milan do not vary greatly from the French and British capitals. The streets are continuously damp in fall, winter and spring; even when there is no rain the air is moist. In summer the streets are kept well sprinkled to lay the dust. In making paving plans these conditions must be considered. However, extreme variations in temperature do not occur, and the winds are not strong. A chief feature of Milan's traffic is the large number of horse cabs. Motor taxicabs are increasing and show a tendency to replace horse-drawn vehicles. In this commercial city heavy trucks are also numerous.

The area of Milanese streets is 6,237,113 sq. yds., and their length is 197.6 miles. Practically all the streets in the center of the city are paved with flat-top granite blocks. These blocks differ in size and shape, being hand hewn, but are usually not more than 4 or 5 ins. thick, 1 or 2 ft. long, and 9 to 14 ins. broad. As these blocks are laid on a sandy bed with no binder or cement the street surface soon becomes uneven. When repairs are made each block is laboriously dressed with a hand chisel. Granite-block paving costs $3.50 to $3.65 per square meter (1.196 sq. yds.).

Many of Milan's streets are not much more than roads, even in the best parts of the city. One class of construction much used is a bed of crushed rock slightly larger than an egg, with sand, gravel, and earth pressed down on top. In addition, a top dressing of liquid tar is applied on some of these streets. The vehicles leave tracks in the slow-hardening tar, while other streets are very muddy in winter and a mass of dust in summer. The cost of making a street with broken stone is $2.12 per square meter, a steam roller keeping down the cost. The few asphalt streets are the best in the city. The asphalt is Italian, coming from the Abruzzi and from Sicily, and is of good quality and abundant. It costs $2.50 to pave one square meter with asphalt or $3.85 on streets with car tracks. To prevent damage to the asphalt from vibration caused by the cars a row of wooden blocks is laid along the rails as a cushion.

Milan's experiments with wooden streets a couple of decades ago were unsuccessful. The Kerr system, with Norwegian fir blocks on a bed of mortar, and sealed with tar, was used on 450 square meters in December, 1885, and demolished in 1887. The same system with oak instead of fir was used on 795 square meters in 1891 and demolished in 1897. The Elli or Perigrini system with beech and oak pegs was used on 920 square meters in 1888 and demolished in 1891, the same system being used on 2,950 square meters in 1889 and demolished in 1893, and on 6,250 meters in 1891 and demolished in 1893.

American wood paving blocks have never been tried in Milan. In order to introduce them here the municipal prejudice must be overcome, and proof afforded of their economy, which is especially important now that such large expenditures have just been made in constructing a huge electric power plant in the Valtellina and in changing the street lighting system.

WORKINGMEN'S INSURANCE IN EUROPE.—The remarkable progress made in recent years by foreign countries on the subject of employers' liability and workmen's compensation is brought out by the first of two volumes comprising the Twenty-fourth Annual Report, just issued by the United States Bureau of Labor, Department of Commerce and Labor.

The country with the most complete system of workmen's insurance is Germany, where practically the entire wage-earning population is required by law to be provided with some form of insurance against industrial accidents, sickness, invalidity and old age. Benefits are also provided in case of maternity for wage-earning women, while for some industries there is a system of insurance to provide benefits for the widows and orphans of wage-earners. The most striking evidence of the wide scope of this system is contained in the figures for the operations of the year 1908. In this year the number of persons insured against accident was about 27,000,000, the total receipts were about $57,000,000, the total expenditures were about $48,000,000, and the amount of the reserve was $65,000,000. The number of workmen compensated for the first time in the year 1908 was 143,000. Separate laws provide a system of compulsory sickness insurance for wage-earners in which the employers pay one-third and the workmen two-thirds of the expense. In 1908 the number of persons (not including agricultural laborers) insured against sickness, was about 13,000,000, the receipts were $95,000,000, and the expenditures were $91,000,000. Besides these two branches there is a third national compulsory system relating to insurance for old age and invalidity, in which the employers and the workmen each pay equal amounts, while the Imperial Government provides a liberal subsidy. In 1908 the number of persons insured under this branch was 15,000,000, the receipts were $68,000,000, the expenditures were $48,000,000, while the reserve amounted to $355,000,000. The three systems of insurance have been in operation for nearly twenty-five years, and the experience under them has been so favorable that in response to a widespread demand the German Government is now preparing to revise and extend the system, and it is expected that in a few years even greater results will be shown than those now obtained.

In Austria the system of workmen's insurance is patterned closely after that of Germany, and provides relief for cases of sickness and accident to workmen engaged in manufacturing and similar industries, though there is a separate organization for the mining industries. The expense of the accident insurance is borne nine-tenths by the employers and one-tenth by the workmen, while the expense of the sickness insurance is defrayed in the proportion of one-third to the employer and two-thirds by the workmen. For the mining employes there is insurance for sickness, accident and old age. One feature of workmen's insurance in Austria, which no other country possesses, is a national compulsory system of old age and invalidity insurance for salaried persons, such as clerical employes of all kinds; the expense of this is defrayed partly by the employer and partly by the insured person.

While in Germany and Austria the workmen's insurance systems are highly centralized, in France the different types of insurance are provided by a great variety of institutions and regulated by a series of separate laws and decrees. The insurance of workmen against industrial accidents is regulated mainly by the law of 1898. The employer is required to provide at his own expense a specified system of benefits to injured workmen, and in order to protect himself he is allowed to insure his liability under the law in a variety of institutions, such as voluntary associations of workmen or of employers, private insurance companies, government insurance funds, etc. In some industries insurance against sickness is compulsory, but in the main the French Government has preferred to grant certain privileges to mutual sickness insurance societies, and those complying with certain requirements receive subsidies from the national government. In 1910 a law was enacted providing for a system of old-age pensions, though a previous law of 1905 had already put into operation a system of relief for indigent and disabled aged persons. The activities of the French Government also extend to the field of unemployment insurance. Since 1905 the Government has made an appropriation of about $20 000 annually to encourage trade unions and similar societies to assist unemployed members.

TRADE PUBLICATIONS.

GAS ENGINES. — Weber Gas Engine Co., Kansas City, Mo. Paper; 8 × 11 ins.; pp. 18; illustrated.

The construction of the Weber gas engine and suction gas producer are pictured and described herein.

MOTOR BOATS.—Racine Boat Co., Racine, Wis. Catalog 7. Paper; 6 × 9 ins.; pp. 32; illustrated.

A comprehensive line of motor boats is outlined here, varying from the smallest dory to a good-sized cruising boat with cabin. There are high-speed racing craft, and all sorts of motor-boat accessories.

FAN MOTORS.—Western Electric Co., New York City. Bulletin 5352. Paper; 8 × 11 ins.; pp. 28; illustrated.

This company's large line of fan motors, as arranged for the season of 1911, is pictured and described. In addition, a few types of less ornamental ventilating fans are appended.

PORTABLE DERRICKS. — John L. Taylor, 1034 West Lake St., Chicago. Paper; 3 × 4½ ins.; pp. 4; illustrated.

These derricks are intended generally for building construction. A short steel post mounted on channel sills carries a removable metal crown, and is fitted with a drum operated by crank handled by one man.

VARIABLE-SPEED MOTORS.—Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Circular 1188. Paper; 7 x 10 ins.; pp. 10; illustrated.

In this bulletin a line of alternating-current slip-ring induction motors is described as designed especially for cranes, hoist and similar intermittent service. The control apparatus is also shown.

LOCOMOTIVE CRANES AND CLAM-SHELL BUCKETS.—Orton & Steinbrenner, Chicago. Paper; 5¾ x 9 ins.; pp. 16; illustrated.

The crane is mounted on a steel frame flat car, and has its turntable carried by a roller live-ring. It is made in various sizes and is shown in use for handling grab buckets as well as for hoisting. The clam-shell buckets have trough-shaped reversible scoops, open at the back.

DRINKING FOUNTAINS.—The J. L. Mott Iron Works, New York City. Catalog "K." Paper; 9 x 12 ins.; pp. 43; illustrated.

All sorts of cast-iron drinking fountains are illustrated and priced in this catalog, including combinations with lamp posts and various types of so-called sanitary drinking fountains.

VACUUM CLEANERS.—The Blaisdell Machinery Co., Bradford, Pa. Paper; 6 x 9½ ins.; pp. 31; illustrated.

The type of vacuum cleaner equipment described here is for a permanent stationary installation. In addition to the pump itself, the piping system for the building is described briefly. A large part of the book is taken up with illustrations of many imposing buildings where the apparatus has been installed.

AIR COMPRESSORS.—National Brake & Electric Co., Milwaukee, Wis. Bulletins 387 and 391. Paper; 6 x 9 ins.; pp. 35 and 67; illustrated.

The first bulletin is entitled "Motor Driven Air Compressors." The mechanical construction of a line of compressors is shown, and that of the motors as well. The operation and governing of the unit is described. Following this are shown the various arrangements of portable units. The final pages are tabulated data of capacities and dimensions.

The second bulletin, entitled "Compressed Air," covers a wider range of apparatus than the first, though much of that shown is an adaptation of the motor-driven compressor developed for air-brake service on electric-railway cars.

ASBESTOS PROTECTED TAL.—Asbestos Protected Metal Co., anton, Mass. Stiff paper; 6 x 9 ins. 35; illustrated.

The material known as a os protected metal is composed of sheet l, made as follows:

A sheet of steel is so hea to expand the minute cells or pores e surface, then passed through a bath cial Compound (the basis of which haltum)— temperature 500° F. At this the compound is of a liquid consist and penetrates every pore or cell on urface of the sheet. As the sheet eme rom this bath, the asbestos is rolled on sides of the sheet and imbedded under y pressure in the asphalt compound.

It is recommended for use fo outside metallic covering.

LIST OF CONTRACTS PENDING.

Plans and Specifications on File.

The following plans (P.) and Specifications (S.) are on file for reference only unless otherwise noted at the office of The Engineering News Publishing Co., 220 Broadway, New York.

Bids close.		Noted in issue of
3-18	Quay wall extension, Portsmouth, N. H. (S.)	2-23
3-24*	Pipe, etc., Lewistown, Mont. (S.)	3- 2
3-25	Dredging, Boston, Mass. (S.)	2-23
3-25	Circulating loop, Vallejo, Cal. (S)	3- 9
3-25	Dredging, etc., Newport, R. I. (S.)	3- 2
4- 1	Power plant extensions, Portsmouth, N. H. (S.)	3- 9
4- 1	Macadam road, etc., Newport, R. I. (S)	3-16
4- 7	Pipe, etc., Atlanta, Ga. (S.)	3- 9
4-14	Sewer, Saskatoon, Sask. (P & S)	3-16

Light, Heat and Power Plants.

Bids close.		Noted in issue of
3-20*	Conduit and wiring system, Plattsmouth, Neb.	3- 9
3-20	Electric passenger elevator, Kansas City, Kan.	3- 9
3-21	Power plant, Webster City, Iowa.	3- 9
3-21	Lighting fixtures, Aiken, S. C.	3- 2
3-21	Generators, Vallejo, Cal.	3- 9
3-21	Electrical wiring, Houston, Tex.	3- 9
3-21	Electric arc and incandescent lights, Gloversville, N Y.	3-16
3-22	Generators, Calgary, Alta	3- 2
3-22	Conduits, Atlanta, Ga.	3- 9
3-23	Lighting Conduit, New York, N. Y	3-16
3-24	Power-house equipment and wiring, Springfield, Mass.	3-16
3-27	Lighting fixtures, Wash., D. C.	3- 9
3-27	Electric light fixtures, Los Angeles, Cal.	3-16
3-27	Electrical pump, National Military Home, Ind.	3-16
3-27	Franchise, Los Angeles, Cal.	3-16
3-27	Generators and engines, Saskatoon, Sask.	3-16
3-30	Lighting fixtures, Wash., D. C.	3- 9
4- 1	Power-house equipment, Portsmouth, N. H.	3- 9
4- 3	Generators, Los Angeles, Cal.	3-16
4- 4	Ventilating, electric wiring and conduits, Rugby, N. Dak.	3- 9
4-19	Generators, etc., Australia (Foreign)	3- 2
Indef*	Electric power, Brookville, Ohio.	3- 9

Bridges.

3-17	Culverts, Toledo, Ohio.	3-16
3-18	Bridge, Fork River, Man.	3-16
3-20	Bridges, Anderson, Ind.	3-16
3-20	Bridge, Republic, Mich.	3-16
3-20	Bridge lumber, Dallas, Tex.	3-16
3-20	Bridge, Jacksonville, Fla.	3- 9
3-20	Bridges, Greenfield, Ind.	3- 2
3-21	Bridge work, Cambridge, Ohio.	3- 2
3-21	Bridge work, Coshocton, Ohio.	3- 2
3-21	Bridge, Albany, N. Y.	2-23
3-21	Bridge pier, Albany, N. Y.	3-16
3-22	Bridges, Vermilion, S. Dak.	3-16
3-22	Bridge work, Cleveland, Ohio.	3- 2
3-23	Bridge work, Williamsport, Pa.	3- 9
3-24	Bridge, Cincinnati, Ohio.	3- 9
3-24	Bridge, Patoka, Ill.	3-16
3-24	Bridge, Brookville, Pa.	3-16
3-28	Bridges, Niagara Falls, Ont.	3-16
3-28	Bridges, Ventura, Cal.	3-16
3-28*	Bridge, Danville, Va.	3- 9
4- 1	Arch, Fredonia, N. Y.	3- 9
4- 3	Bridges, Idagrove, Iowa.	2-23
4- 3	Bridge repairing, Allentown, Pa.	3-16
4- 3	Superstructures, Delaware, Ohio.	3-16
4- 5	Bridge work, Columbus, Ohio.	3-16
4- 5	Bridge work, Cleveland, Ohio.	3- 9
4- 8	Bridge, Mackay, Idaho.	3-16
4-12	Bridge work, Xenia, Ohio.	3-16
4-14	Bridge, Decatur, Ind.	3-16
4-15	Bridge, Minnitonas, Man.	3- 2
4-15	Bridge, Swan River, Man.	3- 2
4-15*	Bridge work, Kenosha, Wis.	3-16

Buildings.

Bids close.		Noted in issue of
3-16	School, New Orleans, La.	3-16
3-17*	Barrack, Fort Monroe, Va.	2-23
3-18	School, Frederick, Md.	3- 2
3-18	Edifice, Groton, S. Dak.	3- 9
3-18	Improvement to jail, Eureka, Cal.	3- 9
3-18	School, Maquoketa, Iowa	3-16
3-20	Building, St. Joseph, Mo.	3-16
3-20	Bank bldg., Norman, Okla.	3- 9
3-20	School additions, Winthrop, Minn.	3- 9
3-20	School, Grover Hill, Ohio.	3- 9
3-20	Construction of bldg, St Joseph, Mo.	3-16
3-21	U. S. post-office, Rock Springs, Wyo.	3- 9
3-21	Bank building, Norman, Okla.	3- 2
3-21	Hospital, Toledo, Ohio	3- 2
3-21	School, Findlay, Ohio	3-16
3-21	School, Windom, Minn.	3-16
3-22	School, Conroe, Tex.	3-16
3-22	School, Enid, Okla.	3-16
3-22*	Buildings, Tompkinsville, N. Y.	2-23
3-22	School, Baltimore, Md.	3- 9
3-22	School, Reevsville, Ohio.	3- 9
3-23	U. S. post-office, Bellingham, Wash.	3- 9
3-23	Jail, St. Charles, Mo.	3-16
3-23	School, Washington, C. H., Ohio.	3-16
3-23	School, Calgary, Alta.	3-16
3-24	School, Wyoming, Ohio.	3- 9
3-25	Armory, Fond du Lac, Wis.	3- 9
3-25	School, East Youngstown, Ohio.	3-16
3-25	School, Adair, Okla.	3-16
3-27	School, Boston, Mass.	3-16
3-28	U. S. post-office, Spokane, Wash.	3- 9
3-29	Building, Blue Earth, Minn.	3- 9
3-29	Bank bldg., Lake City, Fla.	3- 9
3-29	School, South Euclid, Ohio.	3- 9
3-29	Erection of building, Troy, N. Y.	3- 2
3-29	School, Mt. Carmel, Ill.	3-16
3-30	School, Young America, Minn.	3-16
3-30	U. S. post-office, Alliance, Ohio.	3- 2
3-31	U. S. post-office, Ionia Mich.	3- 2
3-31	School, Southington, Conn.	3-16
4- 1	Wiring, etc., in hospital, Jackson, Miss.	3- 9
4- 3	School, Ashland, Ohio.	3-16
4- 3	Buildings, Cleveland, Ohio.	3-16
4- 4	Church, Lansing, Mich.	3- 9
4- 5*	Hospital, Fort Monroe, Va.	3- 9
4- 6	School, Rosewood, Ohio.	3-16
4-10	Post-office, Mt. Sterling, Ky.	3- 9
4-10*	U. S. post-office, Connellsville, Pa	3- 2
4-14	Post-office, Brazil, Ind.	3- 9
4-14*	School, Hazleton, Pa.	3- 9
4-15	Building, Waterbury, Conn.	3- 2
4-15	Plans, Havana, Cuba.	10-20
4-16	U. S. post office approaches, Platteville, Wis.	3-16
4-17	U. S. post office, Ames, Iowa.	3-16
4-18	Barge office, New York, N. Y	3- 9
4-20	U. S. post office, Lagrange, Ga.	3-16
4-21	U. S. post office, McKinney, Tex.	3-16
4-24	U. S. post office, Braddock, Pa.	3-16

Water-Works.

3-16	Pipe, etc., Oil City, Pa.	3-16
3-17	Meters, Chicago, Ill.	3-16
3-17	Chimney, etc., Aurora, Ill.	3- 9
3-18	Well, Watertown, Wis.	3- 9
3-18	Pump, Fort Bayard, N. Mex.	3- 2
3-18	Castings, Chicago, Ill.	3-16
3-18	Pipe and specials, Watertown, Wis.	3-16
3-20	Pumping plant, Ontario, Cal.	3-16
3-20	Laying pipe, Pendletown, Ore.	3-16
3-20	Water mains, Shenandoah, Ia.	3-16
3-20	Water-works, Gettysburg, S. Dak.	3- 2
3-20	Water trench, Souris, Man.	3- 2
3-20*	Water-works, Bristol, Pa.	2-23
3-20*	Pipe, hydrant, etc., Westbury, N. Y.	3- 2
3-20	Water pipe, Fernbank, Ohio.	3- 9
3-20	Water extensions, Nevada, Iowa.	3- 9
3-21*	W-wks materials, San Augustine, Tex.	3- 2
3-21*	Siphon work, New York, N. Y.	3- 2
3-21	Watermains, Grand View, Ohio.	3- 2
3-21	Pumping engine, Ft. San Houston Tex.	3- 2
3-22	Water pipe, Vancouver, B. C.	3- 2
3-23	Water meters, Grand Rapids, Mich.	3-16
3-24*	W-Wks., Lufkin, Tex.	3-16
3-24	Water pipe, etc., Toulon, Ill.	3-16
3-24	Meters, etc., Saskatoon, Sask.	3-16
3-24*	Pipe, Lewistown, Mont.	3- 2
3-24*	Hydrants, valves, etc., Lewistown, Mont.	3- 2
3-25	Water supply impvt., National Military Home, Ind.	3- 9
3-25	Circulating loop, Vallejo, Cal.	3- 9
3-27	Water-works, El Reno, Okla.	3- 9
3-27*	Water pipe, Pittsfield, Mass.	3-16
3-27	Pumping engine, etc., Chapleau, Ont.	3-16
3-28	Water main, Cleveland Heights, Ohio	3- 9
3-29	Water pipe, etc., Winnipeg, Man.	3- 9
3-30	Pumping engine, Kansas City, Mo.	3- 9
3-31*	Filtration plant, Saskatoon, Sask.	3- 9
3-31	Reservoir, Troy, N. Y.	3- 9
3-31	Valves, pipe, etc., Troy, N. Y.	3-16
3-31	Gate well, etc., Astoria, Ore.	3-16
4- 1	Water-works, West Telford, Pa.	3- 9
4- 3*	Water main, Galveston, Tex.	2-23
4- 3*	Cement, Denver, Colo.	3- 9
4- 3*	Pumps, Welland, Ont.	3-16
4- 4	Water tower, Lakewood, Ohio.	3-16
4- 4	Pumping machinery, etc., Rouleau, Sask.	3-16
4- 5	Reservoir, Somerset, Pa.	3-16
4- 5	Reservoir, etc., Keeseville, N. Y.	3- 9
4- 7*	Diversion dam, etc., Chambersburg, Pa.	3-16
4-10	Water extensions, etc., Moose Jaw, Sask.	3- 9
4-15	Storage dam, Wells, Nev.	2-23
4-15*	Dam, etc., North Yakima, Wash.	3- 2
4-15*	Water softening plant, Ft. McKinley, Me.	3- 2
4-20*	Water system, Helena, Mont.	3-16

Sewers.

Bids close.		Noted in issue of
3-16	Sewer, St. Paul, Minn.	3-16
3-16	Sewer, Ironton, Ohio.	3-16
3-17	Sewer, Williamsport, Pa.	3-16
3-17	Sewer, Beloit, Wis.	3-16
3-18	Sewer, Watertown, Wis.	3-16
3-18	Valve basin covers, Chicago, Ill.	3-16
3-20*	Sewer system, Bristol, Pa.	2-23
3-20	Sewer, Fort Washington, Md.	2-23
3-20*	Sewers, Stamford, Conn.	3- 2
3-20	Sewers, Souris, Man.	3- 2
3-21	Sewer, Grand View, Ohio.	2-23
3-21*	Sewers, Moundsville, W. Va.	2-23
3-21	Sewer, Snohomish, Wash.	3-16
3-22	Sewer, Hoboken, N. J.	3-16
3-22	Sewers, New York, N. Y.	3-16
3-22	Sewer construction, New York, N. Y.	3-16
3-22	Dist. and lateral sewers, Holdenville, Okla	3-16
3-24*	Sewers, Louisville, Ky.	3- 2
3-24	Sewers, Putnam, Conn.	3- 9
3-25	Sewer, Galva, Ill.	3-16
3-27	Sewers, Minot, N. Dak.	3- 9
3-28	Sewers, Cleveland Heights, Ohio.	3- 9
3-31	Sewers, Ft. Leavenworth, Kan.	3-16
4- 1	Sewer, Allegan, Mich.	3-16
4- 4*	Sewer supplies, Saskatoon, Sask.	3- 9
4-10	Sewers, Moose Jaw, Sask.	3- 9
4-10*	Sewer, Chambersburg, Pa.	3-16
4-14	Sewer, Saskatoon, Sask.	3-16
4-15	Sewers, Cleveland, Ohio.	3-16
4-15*	Sewer, Kenosha, Wis.	3-16
7- 3	Sewage disposal system, San Jose, Cal.	2-23

Streets and Roads.

Bids close.		Noted in issue of
3-16	Street work, Logan, Ohio.	3-16
3-16	Road work, Jersey City, N. J.	3-16
3-17	Paving, York, Pa.	3-16
3-17	Road material, Muskegon, Mich.	3- 9
3-17	Road construction, Paoli, Ind.	3- 2
3-17	Road work, Cincinnati, Ohio.	3- 2
3-18	Paving, Oshawa, Ont.	3- 2
3-18	Road, Bowling Green, Ohio.	2-23
3-20	Gravel roads, Anderson, Ind.	3- 2
3-20	Grading, Greenfield, Ind.	3- 2
3-20*	Paving, Portsmouth, Va.	3- 2
3-20*	Road improvements, Albany, N. Y.	3- 2
3-20	Pavement, etc., Petrolia, Ont.	3- 9
3-20	Street work, Newport News, Va.	3- 9
3-20	Sidewalks, East Youngstown, Ohio	3- 9
3-20	Paving, etc., Webb City, Mo.	3- 9
3-20	Paving block, Adrian, Mich.	3- 9
3-20	Paving, etc., Youngwood, Pa.	3- 9
3-20	Sidewalks, Bloomfield, N. J.	3-16
3-20	Paving, etc., Topeka, Kan.	3-16
3-20	Road construction, Everett, Wash.	3-16
3-20	Pavement, Emeryville, Cal.	3-16
3-21	Paving, etc., New York, N. Y.	3-16
3-21	Paving, Beaumont, Tex.	3- 9
3-21	Paving, etc., Corona, Cal.	3- 9
3-21*	Walks, etc., Fort Monroe, Va.	2-23
3-22*	Road improvement, Albany, N. Y.	3- 2
3-22	Road oil and paving block, New York, N. Y.	3-16
3-22	Grading, etc., Olympia, Wash.	3-16
3-22	Flagging, Boston, Mass.	3-16
3-23	Pavements, Newark, N. J.	3-16
3-23	Paving, Youngstown, Ohio.	3-16
3-23	Paving, Bucyrus, Ohio.	3-16
3-23	Highways, Albany, N. Y.	3-16
3-23	Paving, Buffalo, N. Y.	3-16
3-23	Paving, New York, N. Y.	3-16
3-24	Grading, etc., Hamilton, Ohio.	3-16
3-24*	Road improvement, Albany, N. Y.	3- 2
3-24	Road impvt., Cincinnati, Ohio.	3- 9
3-25	Pavement, etc., Watertown, Wis.	3- 9
3-25	Paving, etc., Racine, Wis.	3- 9
3-25	Paving, Richwood, Ohio.	3- 9
3-25	Macadam road, Havana, Ohio.	3-16
3-27	Grading, etc., Galveston, Tex.	3-16
3-27	Road gravel, etc., New York.	3-16
3-28	Paving, Bucyrus, Ohio.	3-16
3-28	Grading and paving, Caldwell, Ohio.	3-16
3-28	Grading and paving, Belle Valley, Ohio.	3-16
3-28	Road construction, Noblesville, Ind.	3-16
3-28	Paving, etc., Cleveland Heights, O.	3- 9
3-28	Road work, Bowling Green, Ohio.	3- 9
3-29	Paving, etc., Ravenna, Ohio.	3-16
3-29	Macadam road, Washington, Va.	3-16
3-30	Paving, etc., Guelph, Ont.	3-16
3-30*	Pavement, Poughkeepsie, N. Y.	3-16
3-31*	Paving, etc., Wilmington, Del.	3- 9
4- 1	Pavement, Logansport, Ind.	3-16
4- 1	Road impt. Cleveland, Ohio.	3-16
4- 1	Grading, Merrill, Iowa.	3-16
4- 1	Road work, etc., Newport, R. I.	3-16
4- 3	Road construction, Fowler, Ind.	3-16
4- 3	Road construction, Hartford City Ind.	3-16
4- 3	Road work, Bronson, Iowa.	3- 9
4- 4	Road, Madison, Ind.	3- 9
4- 4	Road construction, Wetumpka, Ala.	3-16
4- 4	Gravel road, Danville, Ind.	3-16
4- 4	Gravel road, Logansport, In	3-16
4- 4	Macadam road, Paoli, Ind.	3-16
4- 4	Macadam road, Kentland, In	3-16
4- 4	Macadamized road, Bloom Ind.	3-16
4- 5	Paving, Knoxville, Tenn.	3-16
4- 5	Stone road, Bloomington, Ind	3-16
4- 5	Culverts, etc., Rugby, N. D.	3- 9
4- 5	Road impvt., Coupeville, Was	3- 2
4- 6*	Curbing, etc., Cambridge, Md	3-2
4- 6	Grading, Riverside, Cal.	3-16
4- 7	Walks, Fort Howard, Md.	3-16
4- 7	Road repairing, Cincinnati, Ohio	3-16
4-10*	Road construction, Madison Barracks, N. Y.	3-16
4-15	Road construction, Swedisboro, N. J.	3-16

Miscellaneous.

3-16	Levee work, New Orleans, La.	3-16
3-17	Wire cable, Washington, D. C.	3-16
3-17	Ditch, Fort Dodge, Iowa.	3-16
3-17	Bath houses, Boston, Mass.	3-16
3-17	Motor trucks, Toronto, Ont.	2-16
3-17*	Extending jetties, New Orleans, La.	2-23
3-18*	Tile, Cerro Gordo, Ill.	3- 9
3-18	Telephone system, Underwood, Ont.	3-16
3-20	Fire hall, Georgetown, S. C.	3-16
3-20	Timber, etc., Ottawa, Ont.	3- 9
3-20	Repairing wharf, Fort McDowell, Cal.	3- 9
3-20	Ponton wagons, Washington Barracks, Wash.	3- 2
3-21	Iron Fence, Corfield Harbor, Md.	3- 9
3-21	Breakwater, Ottawa, Ont.	3- 9
3-21*	Cement, Vicksburg, Miss.	3- 9
3-21	Stone, Vicksburg, Miss.	3- 9
3-21*	Lock and dam, Cincinnati, Ohio.	3- 9
3-21	Ditches, Algona, Iowa.	3-16
3-22	Fire hose, etc., New York.	3-16
3-22	Dredge work, Redwood Falls, Minn.	3-16
3-22	Stone, Memphis, Tenn.	3- 9
3-22	Section houses, roundhouses, etc., Calgary, Alta.	3- 9
3-23*	Dredging, Portland, Me.	2-23
3-23*	Grand stand, Allentown, Pa.	3-16
3-23	Fire lines, New York.	3-16
3-23	Comfort station, New York.	3-16
3-23	Road gravel, New York.	3-16
3-23	Playground, New York.	3-16
3-24*	Rock railway material, Panama, (U. S. Poss.)	1-26
3-25	Railroad cars, Chile (Foreign).	2-16
3-25	Dredging, Boston, Mass.	2-23
3-25	Dredging, etc., Newport, R. I.	3- 2
3-25	Retaining wall, Mount Vernon, O.	3- 9
3-25	Engine house, London, Ont.	3-16
3-28	Ditch, Sibley, Iowa.	3-16
3-30	Fire station, Vancouver Barracks, Wash.	3-16
3-30	Dredging, Grand Rapids, Mich.	3- 9
3-30	Dams, etc., Panama (U. S. Poss.)	1-10
3-30*	Dredging, Wilmington, Del.	3- 2
3-31*	Dredging, Galveston, Tex.	3- 9
4- 1	Bridge, Spain (Foreign)	2- 2
4- 1	Cruisers, destroyers, Ottawa, Ont	2- 9
4- 3	Copper roof, Franklin, Ind.	2-16
4- 3*	Street roller, Sacramento, Cal.	3-16
4- 3	Fire apparatus, Los Angeles, Cal.	3-16
4- 4	Gateway lodge-house, Columbus, Ind.	3-16
4- 4	Wharf, Chateauguay, Que.	3-16
4- 4	Cable Australia (Foreign)	2-23
4- 4*	Rail and ties, Toronto, Ont.	3- 2
4- 5*	Steel barges, Memphis, Tenn.	3-
4- 6	Rock, New Orleans, La.	3-16
4- 7	Pipe, etc., Atlanta, Ga.	3- 9
4- 7	Stone, Seattle, Wash.	3-16
4-10	Channel excavation, Buffalo, N.Y.	3- 9
4-10	Valve jacks, Wheeling, W. Va.	3- 9
4-10*	Sluice gates, Detroit, Mich.	3- 9
4-10*	Dredging, Detroit, Mich.	3-16
4-11*	Rock excavation, Portland, Me.	3-16
4-15	Iron trucks, safes, etc., Egypt (Foreign)	3- 9
4-20	Hospital, etc., (plans and designs) Argentine Republic (Foreign)	1-12
8- 1	Designs, etc., for monument, Cincinnati, Ohio	2- 9

Examinations.

Examination date.		Noted in issue of
3-31	Engineer-Physicist, Wash., D. C.	3- 9
4- 1	Resident Engineer, Albany, N. Y.	3- 9
4- 1	Superintendent Water Supply, White Plains, N. Y.	3- 9
4- 5	Junior Chemist, Wash., D. C.	3- 9
4-12	Cadet Engineer, Washington, D. C	3-16
4-15	Magnetic Observer, Washington, D. C.	3-16
4-19	Aid In Chemistry, Washington, D. C.	3-16
4-19	Junior Chemist, Washington, D. C	3-16
4-19	Statistician In Forest Products, Washington, D. C.	3-16
4-19	Laboratory Aid, Washington, D. C	3-16

EXCAVATING MACHINERY.—The Marion Steam Shovel Co., Marion, Ohio. Bulletin 60. Paper; 9¼ × 6¼ ins.; pp. 16; illustrated.

This contains views and brief descriptions of elevator dredges for gold mining, electric shovels, steam shovels, revolving steam shovels, and large and small dipper dredges.

ELECTRIC CONDUIT.—Sprague Electric Co., New York City. Catalog 436. Paper; 6 × 9 ins.; pp. 42; illustrated.

The several sections of this catalog issued by the Sprague Co. have been brought together for convenient filing. Rigid and flexible conduit is shown with dimensions and prices. A full line of fittings is also included in the subjects of the catalog.

TELEPHONE APPARATUS.—Western Electric Co., New York City. Bulletin T-206. Paper; 4 × 7 ins.; pp. 51; illustrated.

In this little handy catalog is described telephone equipment intended for combined telephone and telegraph service in railway work. In addition to the description of the apparatus itself, about half the book is given up to a description of proper installation. Numerous diagrams of the circuits are shown.

FAN MOTORS.—Westinghouse Electric & Manufacturing Co., Pittsburg, Pa. Circular 1164, and Folders 4100 and 4101. Paper; 7 × 10 ins., and 6 × 3½ ins.; pp. 48, 19, 28; illustrated.

The circular noted is a fairly complete description of the line of fan motors developed for the season of 1911. The equipment shown covers all possible classes of service. In the two smaller folders the smaller types of direct and alternating-current fans are briefly described.

HIGH-PRESSURE VALVE AND PIPE JOINT.—Osborne High-Pressure Joint & Valve Co., The Rookery, Chicago. Paper; 8½ × 11 ins.; pp. 4; illustrated.

The valve has an extension which keeps the flow throttled, and an expansion chamber in the extension equalizes the pressure across the seats when opening and closing. The pipe joint has flanges threaded upon the pipe and bolted together, but their faces bear against a ring fitted between them. These appliances are intended for use with steam, ammonia, gas, hydraulic pressure, etc.

LIGHT LOCOMOTIVES.—H. K. Porter Co., Pittsburg, Pa. Cloth; 6 × 9½ ins.; pp. 224; illustrated.

The line of small engines manufactured by this company, running from the smallest mine types up to eight-wheel passenger locomotives, are described. In addition, there is much general matter on the specifications of construction, materials, etc. At the end of the book are tables and formulas for computing tractive effort, hauling capacity and matter on grades, curves, track construction, tract costs, car capacities, weights and measures, etc.

ELECTRICAL MACHINERY.—General Electric Co., Schenectady, N. Y. Miscellaneous Bulletins. Paper; 8 × 11 ins.; illustrated.

Bulletin 4791 describes voltage regulators for feeder lines, and supersedes earlier bulletins on the same subject. These regulators are of two types, one known as the induction and the other as the switch form. In the first form a rotating element has its speed regulated so as to boost the line voltage with decrease of voltage, and to reverse this action with increase of line voltage. In the second form of regulator the same result is accomplished by switching into circuit more or less of the turns of an auto-transformer.

In Bulletin 4787 is found a description of the several classes of wires and cables manufactured by this company. Data and dimensions of the several kinds and sizes are shown.

In Bulletin 4794 is a description of the 1,200-volt railway lines of the Milwaukee Electric Railway & Light Co. The cars, stations, sub-stations, transmission line, etc., are described and pictured.

In Bulletin 4811, the drum type of controllers for operating variable speed motors in various industrial services is described. These controllers are very similar in design and appearance to the familiar street-railway car controller.

In Bulletin 4812 are shown small direct-current generators to be belted to some source of power. The sizes vary from 1¼ to 20 KW. These are especially intended for lighting small hotels, residences, factories or mills, where the maximum length of feeder is not more than three-quarters of a mile. Except for the smallest size, the generators are all provided with commutating poles, so that adjustment of the brushes for change of the load is unnecessary. This adds to the expense of the machine, of course, but makes it more adapted for the hardships of isolated service.

Bulletin 4813 is a brief description of a simple oil break switch, intended for outdoor use on pole lines. It is intended for use on alternating-current series arc systems or for cutting in and out transformers or any similar service under load. The switch is not automatic.

HIGH-PRESSURE BLOWERS.—B. F. Sturtevant Co., Hyde Park, Mass. Catalog 175. Paper; 6½ × 9 ins.; pp. 43; illustrated.

In this catalog a design of high-pressure blowers is described. This apparatus is intended for furnishing blast for foundries, gas ovens, furnaces, for forcing smoke and other gases through water, for aerating milk, for long-distance ventilation, and, in general, for use where a rotary rather than a reciprocating mechanism is desired with moderately high pressures. Details of construction are given full treatment, and several completed machines are pictured. There is a report of a foundry test of one of these machines.

PUMPING MACHINERY.—The Deming Co., Salem, Ohio. Paper; 7 × 9½ ins.; pp. 189; illustrated.

The apparatus described in this catalog is intended to be driven by any power available, and the lines shown have been designed to cover the whole field. There are, for instance, belted single-acting triplex pumps, both stationary and portable, double-acting motor-driven types, variously geared power pumps for shallow wells, and also various forms and combinations of belt, engine and motor-driven deep-well piston pumps. A few horizontal and vertical centrifugal pumps are shown, and a line of positive rotary force pumps. Miscellaneous accessories, like couplings, motor starters, float switches, etc., are appended. The final pages give miscellaneous information of use to pump users.

ELECTRICAL INSTRUMENTS.—General Electric Co., Schenectady, N. Y. Bulletins 4768 and 4773. Paper; 8 × 10½ ins.; illustrated.

The first bulletin describes a device for recording the maximum load on alternating current circuits having other than unity power factor and constant voltage. The external appearance of the indicator is similar to that of the polyphase watt-hour meter, and in its essential elements it is such an instrument. A very strong damping system is used to introduce a time lag in the recording of the maximum power drawn. The rotating element is controlled and opposed by three phosphor-bronze springs which permit the rotor to make three complete revolutions while the indicating pointer makes the single revolution to which it is limited.

In place of the register of an ordinary watt-hour meter, there is provided a single graduated dial and two pointers, one of which indicates the energy drawn at any time and the other the maximum position reached by the first pointer.

In the second bulletin is described a portable test meter for calibrating customers' watt-hour meters for alternating-current circuits.

ELECTRIC LIGHTING.—National Electric Lamp Association, 411 Hough Ave., Cleveland, Ohio. Engineering Department Bulletins. Paper; 6 × 9 ins.; illustrated.

Bulletin 8-B describes tungsten miniature and low-voltage lamps. These are intended for circuits of 1.5 to 20 volts, and work at specific consumptions of 0.79 to 1.31 watts per candle. They are for use in automobile lamps, on general battery circuits for signs and for special low-voltage circuits.

Bulletin 5-C describes the tantalum multiple lamps made by the associated companies forming this concern. These lamps are intended for 100-125 and 200-250-volt circuits, and are shown in sizes demanding 25, 40, 50 and 80 watts.

Bulletin 9-A is a paper by Mr. S. E. Doane, Chief Engineer of this association, and is entitled "The Cost of Light." This discusses the cost of electrical service, the cost of producing the energy and the cost of lamp renewals.

Bulletin 9-B is a reprint of a paper by Mr. S. E. Doane before the National Electric Light Association at St. Louis, May, 1910. This paper is entitled "High Efficiency Lamps: Their Effect on the Cost of Light to the Central Station."

In an unnumbered bulletin, entitled "The Engineering and Scientific Activities of the National Lamp Association," the work of these laboratories, established by 20 of the prominent lamp companies, is set forth.

In Bulletin 15, the particular subject taken up is "electric sign lighting," with data on performance, economy, equipment and applications.

In Bulletin 13 are shown a line of tungsten lamps of 25 to 500 watt units made for multiple circuits.

In Bulletin 14 is described a type of lamps adapted for turning down when only a dim light is desired. The bulletin covers the description, performance and application of this lamp.

STEAM SHOVEL DITCHER.—Browning Engineering Co., Cleveland, Ohio. Paper; 9 × 12 ins.; pp. 32; illustrated.

The Browning railroad ditcher is a revolving steam shovel designed to be used in widening cuts, opening up ditches, light gravel pit work, handling rails, ties, etc. It is so built that it can be operated from a track laid across the tops of flat cars. Either standard gage or wider gage portable track may be used. The portable track is made in two sections, so that one section may be picked up and transferred ahead of the shovel by the shovel itself. The traveling base, upon which the boiler and other machinery is mounted, is a single casting mounted on hammered steel axles and steel wheels. It is propelled by a horizontal travel shaft driven by a vertical shaft through the center pin by means of bevel gears. On the top of the base casting is fastened the steel rotating gear and roller path upon which the rotating base rests. The traveling and rotating bases are held together by a hollow steel center pin, through the center of which the vertical shaft passes. The rotating base is also a single casting and is supported on four rollers which are journaled in its lower side, and rests on a circular track on top of the base.

The complete machine with a half tank of water, two gages of water in the boiler, one-half a ton of coal, a dipper full of dirt and one operator weighs aproximately 45,000 lbs. On a standard gage track, without track clamps or blocking, it is claimed to safely lift: 15,000 lbs. at a radius of 10 ft., 9,000 lbs. at a radius of 20 ft., and 5,000 lbs. at a radius of 30 ft. By using the hoisting and backing drums a clam shall, orange peel or scraper bucket may be used. A pile-driving attachment can also be applied with a 2,000-lb. hammer. When so rigged the apparatus can drive an 18-in. pile at 17 ft. from the center of the machine.

EXPLOSIVES.—E. I. du Pont de Nemours Powder Co., Wilmington, Del. Heavy paper; 6 × 9 ins.; pp. 118; illustrated.

"The Farmer's Handbook of Explosives" is the title of this booklet. It is a very interesting publication not only to farmers, but to all those who wish to know just how dynamite and other high explosives are used in agriculture.

The treatment is divided into four stages, of which the first is clearing the land. Twenty pages are devoted to a description of the clearing of the land of stumps, treating in order stumps of different varieties of trees, with particular directions for each case. Then follows three pages on felling trees with dynamite, and four pages on blasting out boulders. In each case definite directions are given for drilling, kind of powder, etc.

The second stage of development refers to getting the farm into shape. This covers the digging of ditches, draining swamps, grading roads, excavating building foundations, sinking wells and digging post holes for fences. Of these, the most interesting is the method given for draining swamps. This is accomplished by boring holes through the muck and hardpan down into underlying strata of sand or gravel (where these exist) and exploding comparatively heavy charges of dynamite. This opens up a natural drain, through which the water is drawn away. This method can sometimes be used very cheaply in swamps, which would otherwise require a number of miles of ditching to drain.

The third stage in the process is that of preparing the land for crops, or plowing with dynamite. This is perhaps the last use to which the farmers of a few years ago would have conceived dynamite could be put to. It is claimed that this is a very effective way of turning over the soil and opening up the subsurface strata. Another use of the same nature is for planting trees in the orchard. It is here claimed that holes dug by dynamite are in every way superior to hand-excavated holes for planting young trees. The explosion loosens the soil for many yards around, and thus gives the young roots of the tree an excellent chance to start.

The last stage referred to is keeping up the farm. This, however, refers to more or less foreign subjects, such as breaking up ice gorges, starting log-jams and breaking up log rollways.

The last 20 pages describe the use, storage, thawing and handling of high explosives. Directions are given in such a way as to be clear to anyone who can read English what precautitons are necessary to insure safety. Three pages of DONT'S cover the things not to do with regard to explosives.

ELECTRIC MOTOR DRIVES.—General Electric Co., Schenectady, N. Y. Miscellaneous Bulletins. Paper; 8 × 10½ ins.; illustrated.

In Bulletin 4767 are shown motors designed particularly for use in steel mills. Among the prominent installations described are the 6,000-HP., 6,600-volt induction motors in the Gary plant of the Indiana Steel Co. Direct-current motors are also included.

Bulletin 4771 is entitled "Hand Operated Starting Compensators for Alternating-Current Motors," and supersedes an older bulletin on the same subject. The title is self-explanatory.

Bulletin 4774 describes motor and turbine-driven rotary air compressors. These machines were designed to meet a demand for rotary blowing machines with which higher pressures could be developed than with the ordinary fans. This line of machines may be used to furnish from 500 to 36,000 cu. ft. of free air per minute at pressures of from 0.75 to 4 lbs. per sq. in.

Bulletin 4774 describes a single-phase induction motor offered to meet the power requirements of plants which are unable to secure other than single-phase current. The capacities run from 1 to 15 HP. on 110 to 220-volt circuits. This motor is suitable for constant-speed service where the full-load torque does not exceed 140% of the starting. The rotor is a smooth-core, squirrel-cage, high-resistance type. The rotor in starting revolves freely on a shaft by means of a frictionless bearing until approximately 75% of normal rated speed is reached. The load is then picked up by an automatic centrifugal clutch.

Bulletin 4784 describes electric-driven machinery in pulp and paper mills. The advantages of the use of motor drives in this industry are presented, and plants in Kimberly, Wis., Berlin, N. H., Dolby and East Millinocket, Me., De Feriet, Glens Falls, Lockport and Hudson Falls, N. Y., and Hartsville, S. C., are described.

Bulletin 4785, entitled "Electric Drive in Woodworking Plants," illustrates and describes electric motor-driven wood-boring machines, drills, jig, rig, band, circular and swing saws, planers, etc.

For other Proposal Advertisements see pages 51, 52, 53, 54, 56 of Advertisements and Construction News page 132.

REPAIRING TURNPIKE.

New Brunswick, N. J.

Sealed bids will be received by the Board of Chosen Freeholders of Middlesex County, State of New Jersey, at the Court House, New Brunswick, N. J., on Thursday, April 6, 1911, at 11 o'clock A. M., for the repairing of the Cranbury-South River Turnpike, according to the plans and specifications on file with the County Collector, 40 Paterson Street, New Brunswick, N. J., and F. F. Simons, County Engineer, Roosevelt, N. J.

Each bid must be accompanied with a certified check in the amount of $1,000.00 payable to the order of Thomas H. Hagerty, County Collector, without any conditional endorsements, which check shall be forfeited if the successful bidder fails to enter into contract within ten days from the award of the bid.

The Board reserves the right to reject any or all bids.

P. H. S. HENDRICKS,
Director.
Attest: A. W. BISSETT, Clerk.

STREET ROLLER.

Sacramento, Cal.

Sealed proposals for a Street Roller of modern and approved type, weighing not less than 12 tons and propelled either by steam or gas will be received at office of the City Clerk, Sacramento, Cal., up to 8 o'clock P. M. of Monday, April 3, 1911. Proposals must be accompanied by illustrations, specifications and a certified check, made payable to City Clerk for an amount not less than ten (10) per cent. of the bid. Full payment will be made upon establishment of guarantee and acceptance by City of Sacramento.

The right to accept or reject any or all bids is reserved by Board of Trustees.

M. J. DESMOND,
City Clerk.

GRAND STAND.

Allentown, Pa.

Notice is hereby given that sealed proposals will be received by the Executive Committee of the Lehigh County Agricultural Society at the office of the society, Stiles Building, Allentown, Pa., until 12 o'clock noon, March 23, 1911, for the construction of a new grand stand at the Allentown Fair Grounds.

1. Each bid must be made out on the form attached to the specifications, otherwise it will not be considered.

2. Each bid must be accompanied by a certified check for the sum of Five Thousand ($5,000) Dollars, payable to the treasurer of the Lehigh County Agricultural Society as a guarantee of good faith. Said check will be held by the officers of the society until the rejection of the bid, or in case of being awarded the contract, until the same is executed and a satisfactory bond for the sum of Twenty-five Thousand ($25,000) Dollars is tendered to the society, conditioned upon the faithful performance of the work and guaranteeing the character of the same for a period of one year after its acceptance. If upon the award of the contract to him, the bidder fails to enter into a contract with the said society and file said bond, after five (5) days' notice from the secretary of the association, the proceeds of the check shall be forfeited for the use of the society as liquidated damages.

3. The bids must be accompanied with said checks as above set forth and must be enclosed in sealed envelopes and addressed to "Executive Committee, Lehigh County Agricultural Society, Stiles Building, Allentown, Pa.," and marked "Proposals for the construction of a new grand stand."

4. The specifications provide that 20% of all monthly estimates due the contractor shall be withheld by the society until the final completion of the work and its acceptance by the Lehigh County Agricultural Society. If the successful bidder fails to complete the said work until the first day of September, 1911, such portion of the 20% retained as the Executive Committee shall deem adequate, shall be paid into the treasury of the society as liquidated damages for non-completion of the work within the specified time.

5. Intending bidders can examine the plans and specifications at the office of the engineer, Robert S. Rathbun, 315 Commonwealth Building, Allentown, Pa., or at the office of the society, Stiles Building, Allentown, Pa., on or after March 14, 1911. If plans and specifications are desired, they can be obtained by depositing the sum of One Hundred ($100) Dollars with the secretary of the society. This deposit is to be returned upon the return of the plans and specifications and the deposit of a bid. If no bid is submitted, said deposit shall be paid into the treasury of the society. Parties abroad receiving plans, will be required to pay all express charges.

6. The Executive Committee reserves the right to reject any or all bids.

JOHN W. ECKERT,
President.

Attest:
H. B. SCHALL, Secretary.

WATER-WORKS.

Helena, Montana.

Sealed proposals will be received at the City Hall, Helena, Montana, until 8 P. M., Thursday, April 20th, 1911, for furnishing of all material and the construction of a water-works system, reservoir pipe line, and distribution system for the City of Helena, Montana, all according to plans and specifications.

The work involves headworks with concrete core wall, and approximately 14 miles of 18-in. wooden conduit, 7.4 miles 24-in. wood conduit, 0.8-mile 24-in. steel conduit, 43.4 miles of cast-iron mains, 260 hydrants, 283 gate valves, specials, etc., and a storage reservoir, lined with concrete, to hold approximately five million gallons, together with all appurtenances; using about 2,800 cu. yds. of concrete, and requiring about 79,000 cu. yds. class (A) excavation, 12,000 cu. yds. class (B) excavation, 222,000 lineal feet class (A) trenching, and 16,000 lineal feet class (B) trenching.

Plans and specifications, also forms of contract and proposals may be seen at the office of the City Clerk, J. A. Mattson; also at the office of the City Engineer, Charles W. Helmick, and copies of all thereof obtained upon payment of $5.00.

Each bid must be accompanied by a certified check for $20,000.00, payable to the Mayor of Helena, Montana, as a guarantee that bidders will, if successful, promptly execute a satisfactory contract and bond, as specified and required, with satisfactory surety in the sum of One Hundred and Fifty Thousand Dollars, for the faithful performance of the contract.

The right is reserved to reject any or all bids, and also to waive any technical defects.

Bidders are invited to be present. Proposals must be marked "Proposals for Construction of Water Works System for Helena, Montana," and should be made out in the form within, and be accompanied by the printed specifications.

By order of the City Council.

J. A. MATTSON,
City Clerk.

TRUNK SEWER.

Kenosha, Wisconsin.

Notice is hereby given that Sealed Proposals will be received by the Street Assessment Committee, of the City of Kenosha, Wisconsin, until April 15th, 1911, at 2.00 P. M., at the office of the Street Assessment Committee of the City of Kenosha,, for the furnishing of all material and labor required for the construction and completion of a Main Trunk Sewer, in the City of Kenosha, requiring approximately the following quantities:

5,000 feet of 99" or 120" circular concrete or brick sewer.
1,200 feet of 78" circular concrete or brick sewer.
1,200 feet of 66" circular concrete or brick sewer, and 20 manholes.
Also one reinforced concrete outlet, and breakwater for said proposed trunk sewer.

According to the plans, specifications, details, etc., now on file in the office of the City Engineer of the City of Kenosha, where a copy of such plans, specifications, details, etc., may be obtained.

Each bid must be accompanied by a certified check in the amount of at least 5% of the bid, and made payable to the City of Kenosha. Said certified check to be forfeited in case of failure of any contractor to enter into contract with the City of Kenosha.

All bids must be marked on the envelope "Street Assessment Committee" and filed in the office of the Street Assessment Committee, in the City Engineer's office in the said City.

The successful bidder will be required to enter into a bond at the time of the making of the contract, with not less than two sureties, who shall be free-holders of the State of Wisconsin, and shall justify as to their responsibility, and by their several affidavits show that they are worth in the aggregate at least the amount of the entire contract price in property, not by law, exempt from execution.

Surety company bonds approved by the Street Assessment Committee will be accepted in lieu of personal sureties.

N. B. Blanks for proposals, and blank contracts and bonds will be furnished on application to the City Engineer.

The bids will be decided by the Street Assessment Committee and the contract awarded to the lowest responsible bidder.

The said Street Assessment Committee reserve the right to waive any informalities on said bids.

And also reserve the right to reject any and all bids.

Dated, this 15th day of March, 1911.

M. J. SCHOLEY,
R. S. MOTH,
GEORGE R. WADE,
Street Assessment Committeee.

CONCRETE BRIDGE.

Kenosha, Wisconsin.

Notice is hereby given that Sealed Proposals will be received by the Street Assessment Committee, of the City of Kenosha, Wisconsin, until April 15th, 1911, at 4.00 P. M., at the office of the Street Assessment Committee of the City of Kenosha,, for the furnishing of all material and labor required for the rebuilding and alteration of the reinforced concrete bridge, known as "The Middle Street Bridge," in the City of Kenosha, Wisconsin.

According to the plans, specifications, details, etc., now on file in the office of the City Engineer of the City of Kenosha, where a copy of such plans, specifications, details, etc., may be obtained.

Each bid must be accompanied by a certified check in the amount of at least 10% of the bid, and made payable to the City of Kenosha. Said certified check to be forfeited in case of failure of any contractor to enter into contract with the City of Kenosha.

All bids must be marked on the envelope "Street Assessment Committee" and filed in the office of the Street Assessment Committee, in the City Engineer's office in the said City.

The successful bidder will be required to enter into a bond at the time of the making of the contract, with not less than two sureties, who shall be free-holders of the State of Wisconsin, and shall justify as to their responsibility, and by their several affidavits show that they are worth in the aggregate at least the amount of the entire contract price in property, not by law, exempt from execution.

Surety company bonds approved by the Street Assessment Committee will be accepted in lieu of personal sureties.

Blanks for proposals, and blank contracts and bonds will be furnished on application to the City Engineer.

The bids will be decided by the Street Assessment Committee and the contract awarded to the lowest responsible bidder.

The said Street Assessment Committee reserve the right to waive any informalities on said bids.

And also reserve the right to reject any and all bids.

N. B. The contractor will be required to wait until the next tax levy, to wit, about April 1st, 1912, before receiving his money on this contract.

Dated, this 15th day of March, 1911.

M. J. SCHOLEY,
R. S. MOTH,
GEORGE R. WADE,
Street Assessment Committeee.

WOOD BLOCKS.

Asbury Park, N. J.

Sealed proposals are invited by the Common Council for furnishing and laying about 10,500 square yards of creosoted wood blocks, vitrified brick or Bitulithic, as laid under the patents of Warren Brothers Company, on Main Street, from the southerly line of the City to the northerly line of Summerfield Avenue.

Bids will be received at the City Clerk's office until 6 o'clock P. M., March 27th, 1911, and should be addressed to the undersigned and endorsed "Bid for Pavement."

Each bid must be accompanied by a certified check for One Thousand Dollars, made payable to the Treasurer of the City of Asbury Park.

Specifications and blank forms for bidding can be obtained of the City Clerk.

The Common Council reserves the right to reject any and, or, all bids, and to waive any informality in the bids received where such informality is not detrimental to the interests of the City.

WILLIAM C. BURROUGHS,
City Clerk.

Asbury Park, N. J., March 10th, 1911.

DAM, INTAKE, RESERVOIR AND STANDPIPE FOR BIRCH RUN WATER SUPPLY.

Chambersburg, Franklin County, Pa.

The Borough Council of Chambersburg, Franklin County, Pennsylvania, will receive sealed proposals up to 8 o'clock p. m., of April 7, 1911, for the construction of a diversion dam and intake chamber, a reservoir of 2,200,000-gallons capacity, a standpipe ten (10) feet diameter and forty-five (45) feet high, all in accordance with plans and specifications.

Bids for the standpipe to be in a lump sum, covering the construction and erection, complete, upon foundations.

Bids for the dam and intake, for the reservoir and foundations for the standpipe may be in lump sums covering the entire construction, or bids may be at unit prices per cubic yard of material excavated and placed in embankment; or otherwise disposed of, for borrowed clay, for puddle lining in place, for rubble masonry, or for concrete in place. Also for brick per thousand (1,000) laid in sand and laid in cement, rip-rap per square yard, for fence per al foot, and for placing in position, ng and securing the necessary in effluent, drain and overflow pipes, appurtenances connected therewith.

Each bidder must accom his proposal or proposals with a ied check, drawn to the order of the asurer of the Borough of Chambersbu the sum of $300.00.

A date for the completion the work bid for to be stated in each osal.

The borough reserves the to reject any or all bids.

Plans and specifications are lable at the City Hall, Chambersburg, at the office of John Birkinbine, sulting Engineer, Parkway Building d and Cherry Sts.), Philadelphia.

By order of the Borough C

C. O. D,
Chairman Water Com ttee.

SEWERAGE AND SEW GE DISPOSAL.

Borough of Chambersb Pa.

Proposals for Constructing a S m of Sanitary Sewers, a Main Outfa ewer, and a Sewage Disposal Plant, wi e received by the Borough Council til 8 o'clock Monday evening, April th enth, 1911, at Council Hall.

Bids will be opened the same ev ing.

The Sanitary Sewer System co rises approximately:

69,000 feet 8-inch terra cotta pi
4,000 feet 10-inch terra cotta pipe.
1,500 feet 12-inch terra cotta pi.
2,500 feet 15-inch terra cotta pipe.
3,600 feet 18-inch terra cotta pipe.
4,100 feet 24-inch terra cotta pipe.

Manholes, Y-branches, and other accessories.

The Main Outfall Sewer comprises approximately:

460 cu. yds. Concrete or stone retaining walls.
1,400 feet 20" × 30" Concrete Sewer.
72 feet 24-inch cast-iron pipe.

The Disposal Plant comprises:

900 feet 16-inch force main.
960 feet 12-inch cast-iron siphon line.
1 pump house and collecting well, equipped with three electrically driven, centrifugal pumps, capacity 1,000 gallons per minute.
5 concrete settling tanks.
1 sprinkling filter bed, 160 ft. × 125 ft.
1 sand filter for sludge, grading, and other work.

Plans and specifications may be seen at the Borough Engineer's office, and at the office of Albright & Mebus, 908 Land Title Building, Philadelphia, or may be secured from the Borough's Engineer, R. M. Huber, upon payment of $25.00, which sum will be refunded when the plans and specifications are returned in good order.

Bids must be made out on blanks furnished by the Borough's Engineer.

Each bid must be accompanied by a certified check for at least 5% of the total amount of the bid.

Borough Council reserves the right to reject any or all bids, and award the contract as may be deemed to the best interest of the Borough.

By order of Borough Council.

S. K. SHYROCK,
Chairman Sewer Committee.

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